

State of
**INFORMATION
TECHNOLOGY** in Missouri

2013

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COMMISSIONER'S MESSAGE

DOUG NELSON



Commissioner

TO THE GENERAL ASSEMBLY AND THE CITIZENS OF MISSOURI:

At a time when technology is rapidly evolving and constantly changing, it has never been more imperative for us to make investments in our technological infrastructure and equipment.

First, we have an obligation to protect our state data. Our networks and systems are constantly under attack by identity thieves, hacktivists and state-sponsored cyber warriors. We must deploy and maintain the cutting-edge cyber security technology that will help us combat these inevitable attacks.

Second, the status quo is no longer an option. Legacy systems developed more than 20 years ago with dated technology are inhibiting our ability to transform government and leaving the state exposed to systems that will fail. We need to modernize these systems and drive efficiency by creating automated processes to replace manual and paper intensive systems that are inefficient and severely out of date.

Third, our citizens expect us to deliver easy-to-use online services that can be accessed from any device at anytime. We must move beyond paper applications and in-person visits. These practices are no longer acceptable or cutting-edge. We must continue our emphasis on digital government and evolve with the rest of the world in this age of mobility before we find ourselves falling radically behind.

Sincerely,

Douglas E. Nelson
Commissioner of Administration

INTRODUCTION

This report, the 2013 State of Information Technology in Missouri, is provided by the Information Technology Services Division (ITSD), a part of the Office of Administration (OA).

ITSD provides direct IT support to nearly all of the state government agencies that are under the umbrella of Missouri's 14 consolidated executive departments and works with those state agencies to answer Gov. Nixon's call for more effective and efficient government operations.

There are IT units outside consolidation that provide support for the Department of Transportation, Department of Conservation, certain elected officials, Missouri's Courts, Missouri's Legislature and other state agencies. These non-consolidated units provide valuable IT services to the State of Missouri, but have not been included in this report.

The report includes an overview of each of ITSD's functional areas and each of the 14 web and application development teams that support the consolidated departments. The report does not provide a complete discussion of any organization's technology systems, 2013 accomplishments or 2014 projects. That is beyond the scope of this document.

MAJOR IT INITIATIVES

This report provides transparency on many of ITSD's projects and activities, a good number of which address ITSD's major initiatives. These initiatives include:

- 1. Cyber Security**
- 2. Equipment Refresh**
- 3. Legacy System Modernization**
- 4. IT Governance**
- 5. E-Government**

MAJOR IT INITIATIVES

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Cyber Security

Protecting state assets, networks, systems and data is a challenge for all states and the threat to our Cyber security from identity thieves, hacktivists and advanced persistent threats becomes more challenging to defend against every month. Hackers do employ automated attacks against our state in an attempt to identify vulnerabilities that they can exploit, yet their use of social engineering and spear phishing in targeted, non-automated attacks against state employees is getting more and more sophisticated. This means that every state employee, not just IT, plays an important part in defending against these very real threats.

ITSD received additional funding for Cyber security from the Governor and Legislature during the 2013 legislative session. These funds are already being put to use by ITSD's team of Cyber security professionals as they enhance the State's Cyber security systems and train state employees in Cyber security best practices.

Equipment Refresh

As a result of the 2007 economic crisis, ITSD's General Revenue (GR) budget was reduced by approximately \$20 million in FY 2010. That cut to ITSD's core budget has never been restored. One tactic that ITSD used to reduce spending and comply with the budget cut was to defer equipment refresh into the future. That tactic, while necessary, has resulted in an inventory of desktops, laptops, servers and network equipment that is less than satisfactory for many state agencies.

For example, as of July 1, 2013, the state had approximately 20,000 Windows XP computers in use that must be replaced by April 8, 2014 when Microsoft discontinues support of that old operating system. Many of these machines required a half hour to boot and minutes to open Excel or Word documents. This is a terrible drain on employee productivity. The project to replace these computers is currently underway.

However, without additional core funding, a large amount of problematic equipment will remain in inventory and cause issues for state employees.

Legacy System Modernization

Several legacy system modernization projects are currently underway that serve to:

- *Enhance program effectiveness*
- *Improve employee productivity and reduce long-term costs*
- *Increase citizen access to state services, information and data*
- *Reduce risk of system outages and failure*

In fact, large multi-year projects for Human Services Eligibility and Enrollment, Unemployment Insurance, Taxation and Corrections are underway.

Despite the progress noted above, the state maintains hundreds of legacy systems. Many of these systems are neither effective nor efficient, are difficult to access and not sustainable in the long term. Investing in the modernization of those systems is a good opportunity for the state.

IT Governance

IT Governance ensures that IT resources are used effectively and efficiently and are used to meet the strategic goals and objectives of the state. IT Governance ensures that the right projects are executed at the right time.

ITSD works with the agencies it supports to develop strategic plans and ensure that projects identified for funding and execution are delivered as expected and meet their business objectives. ITSD also works to maximize the value of the state's IT assets by sharing services, code and knowledge.

E-Government

E-Government is defined as the use of technology to improve the effectiveness and efficiency of the delivery of government services and information to citizens, businesses and government agencies. E-Government initiatives and projects leverage technology to improve program performance, stretch budget dollars, increase state employee productivity, simplify citizen access to government services and much more.

Many of the projects described in this report replace paper-intensive and manual-intensive processes with ones that are more effective and efficient.

National Broadband Map

The National Broadband Map (NBM) is a searchable and interactive website that allows users to view broadband availability across every neighborhood in the United States.

You can also view statewide and regional service and speed maps based on data from over 100 participating Internet Service Providers on our [Maps & Data](#) page.

[Check out the National Broadband Map](#)



BROADBAND

MoBroadbandNow (MBBN) has seven core objectives including:

1. *Collecting and verifying data and information*
2. *Preparing comprehensive state and regional broadband maps*
3. *Establishing regional technology planning teams*
4. *Building new and leveraging existing relationships with broadband stakeholders*
5. *Providing technical assistance*
6. *Tracking the progress of infrastructure projects and providing transparency*
7. *Convening public forums and community outreach*

Established in 2009 by Governor Jay Nixon as a public-private initiative to expand and enhance broadband accessibility and adoption throughout the state, MOBroadbandNow's first effort was partnering with data providers to identify underserved and unserved communities in the state. Through a competitive award process, funding was secured to design and build 19 new broadband infrastructure projects. Missouri providers were awarded \$261 million under the American Recovery and Reinvestment Act (ARRA) of 2009. The total value of these projects, including additional private cash and in-kind support, is \$320 million. Missourians have already begun reaping the benefits of improved high-speed service and more citizens will see faster, reliable connections in the future.

MBBN is playing a critical role beyond the ARRA-awarded projects. Strategic partnerships have been developed to launch new pilot projects, strengthening Missouri's global competitiveness.

Progress

Accessibility Goal Reached

In 2009, Governor Nixon set an ambitious goal that at least 95 percent of all Missourians would have access to broadband connectivity by the end of 2014. The National Telecommunications and Information Administration certified in June 2013 that 97 percent of all Missourians, including 92 percent of rural Missourians have access to broadband connectivity. The goal was exceeded ahead of schedule.

Project Completion

Several MoBroadbandNow partner providers have completed infrastructure construction, adding thousands of new fiber miles and connecting more homes and businesses with broadband. Projects completed include: BlueBird Network, Orchard Farm, Sho-Me Technologies, United Electric Cooperative and Windstream Communications.

Rural Health Broadband Initiative

The Rural Health Broadband Initiative supports rural health systems and their communities with technical assistance. Healthcare professionals and providers need access to broadband to offer telemedicine services, electronic health record management, patient registration and data collection, digital imaging and transmission, professional development and training along with other applications through online resources. The initiative is collaborating with 15 rural hospitals with 50 patient beds or less, collecting data and information on broadband connectivity and usage to the main institutional building and its remote health clinics as well as with independent medical professionals. In addition, MoBroadbandNow partnered with Microsoft and its global health and life sciences division to assist rural health in better technology usage and access.

AgBroadbandNow

AgBroadbandNow is a collaborative project with the United States Department of Agriculture (USDA) Missouri State Office, Missouri Department of Agriculture (MDA), professional agriculture and agri-business trade associations as well as individual farmers, ranchers, breeders and producers to expand broadband accessibility in one of Missouri's leading economic engines. In 2013, two strategic planning sessions were held to study methods of expanding wireless mobility to large tract, low density farming communities as well as taking advantage of new technology in farming equipment and operations. The information and recommendations were published in a report on "broadband access, usage and potential on Missouri farms and rural communities."

In 2013, MBBN:

- Held the 2013 Broadband Telemedicine Summit in St. Louis. The bi-state conference, in partnership with the state of Illinois, included plenary sessions and interactive discussions with nationally recognized thought leaders in telehealth networks, telemedicine practice and new device technology. Keynote speaker was Jon Linkous, president of the American Telemedicine Association.
- Completed second round of regional broadband planning and implementation with 18 grassroots, citizen-led teams. The teams focused on additional infrastructure deployment, economic development and growth, quality healthcare through telemedicine and agriculture and agribusiness.
- Completed second round of statewide residential and business broadband data collection.
- Completed Rounds 7 and 8 of statewide and regional broadband data mapping including accessibility, speed and provider availability.
- Partnered with 112 identified Internet Service Providers (ISPs) in Missouri to identify and resolve broadband inaccessibility.
- Published article on the impact of regional strategic broadband planning in the April issue of "Planning" magazine.
- Published four quarterly broadband infrastructure "progress reports" on the status of construction projects.
- Collected four quarterly quantitative usage reports and case studies on broadband and telemedicine.
- Completed feasibility study on developing and implementing enhanced disaster recovery and cloud storage capabilities for rural healthcare systems.
- Completed first round of data collection in Kansas City metropolitan area on the deployment of ultra-high-speed (1 gigabit) broadband and competitive pricing.

END USER SUPPORT

End user support is provided so that state employees can resume the normal course of their duties in the event of computer malfunctions, lost passwords, and other abnormalities. End user support is also provided when technical assistance is needed during special events like presentations and conferences. ITSD's End User support group (ITSD-EUS) provides a wide range of IT assistance to employees of consolidated agencies within state government and some public entities that are affiliated with these agencies. State employees can make an IT support request by utilizing the online "helpdesk" ticket system or calling the Tier I call center. Problems are resolved by Level I and Level II technicians.

Critical services performed by ITSD-EUS include:

Device Management

The routine needs of over 40,000 traditional desktops are managed by pushing out Windows updates, virus definition files and software to computers throughout the state. In addition, iOS devices like iPhones and iPads are managed to maintain the integrity of the State's data and network.

Level I Helpdesk

The Level I helpdesk staff provide prompt response and troubleshooting often in cooperation with the end user via phone. Level I support staff are able to employ remote access support tools to increase productivity and provide training to the customer. Level I technicians are trained to escalate issues that cannot be resolved quickly to the Level II support team.

Level II Helpdesk

In all instances, Level II staff will attempt to resolve issues remotely, maximizing work productivity. However, Level II field staff, located throughout Missouri, must often be physically present with the customer to provide effective service.

E-Waste Disposal

ITSD-EUS coordinates the disposal of electronic waste to safeguard state data.

Printer Management

Over 12,000 printers in use by state agencies are routinely managed and serviced by troubleshooting.

Accomplishments

Equipment Deployment

ITSD-EUS deployed over 9,000 desktop computers, 1,300 laptops, 500 tablets and 1,600 printers during the previous year. As part of the effort, 15 DOC Correctional Facilities were given complete computer refreshes. Nearly 2,900 new PCs were deployed to replace equipment with an average age of 8.5 years. The refresh eliminated older equipment that was slow and prone to failure and increased productivity for DOC staff immediately.

Help Requests

ITSD-EUS completed 174,618 requests for help during the previous year.

Projects

Managed Print Services

A Managed Print Services pilot is currently underway that allows ITSD to evaluate the outsourcing of print services (printers, printer support, printer supplies) to a vendor. ITSD could outsource some or all of its printer management duties to a vendor-partner if the pilot proves to be a success.

Windows XP and Office 2003 End of Support

As of April 8, 2014, Microsoft is discontinuing support of Windows XP and Office 2003. On that day, devices utilizing that software will no longer be allowed to connect to the state network because of security concerns. ITSD-EUS is working diligently to ensure that XP devices are migrated to Windows 7 and Office 2003 is upgraded to a supported version of Office. Tactics for the software migration include hardware replacement, hardware retirement, desktop virtualization and software upgrades. Over a two-year period, ITSD will have removed over 28,000 instances of Windows XP from the State network.

GEOGRAPHIC INFORMATION SERVICES

The Office of Geospatial Information (OGI) is responsible for coordination, guidance, leadership and planning the implementation of Missouri's statewide geospatial information technology. The office identifies, coordinates and guides strategic investments in geospatial information technology, data and service systems to ensure effective implementation and use of geospatial information by state government, local government and the public as an enterprise resource to maximize benefits for Missourians.

Critical services performed by OGI include:

Geographic Information Systems (GIS) and Software Support

OGI staff administers Enterprise GIS, maintaining several GIS servers and geospatial databases. Staff coordinate data acquisition with other state, federal and local agencies and geo-enable data through location services. They also perform quality control checks to ensure data accuracy and provide support to GIS software users.

Geospatial Technology Program Integration

OGI staff work with program managers to integrate geospatial technology into programs for the State of Missouri and create GIS projects that improve program effectiveness, including grant management, asset tracking and catastrophic disaster planning.

Mapping Applications

OGI staff is responsible for creating mapping applications like the Missouri Common Operating Picture (MoCOP) used by emergency managers, Natural Resources Interactive Mapping Service, Women, Infants and Children (WIC) Stores and Clinic Locator and the Flu Clinic Locator. In addition, staff create products such as the Disaster Support Atlas, which provides emergency support map books for every county in the State of Missouri in a geo-enabled PDF format.

Accomplishments

Callaway Nuclear Plant GIS

OGI completed a map modernization for Callaway Nuclear Plant Standard Operating Procedures, an online response tool for Callaway and Cooper nuclear plants and an online editor for school bus routes in Callaway Nuclear evacuation planning zones (EPZ).

Drought Relief Maps

OGI completed a series of maps depicting funds awarded to Missourians for drought relief.

Enhanced Enterprise Zone (EEZ) Mapping

As part of a project for the Department of Economic Development (DED), OGI developed a web map application which allows users to view prospective Enhanced Enterprise Zone (EEZ) block groups and their relevant attributes while simultaneously using the new EEZ database application in a separate browser. The EEZ Map Viewer also contains the Census 2000 Block Group Enhanced Enterprise Zones, the Missouri House Districts, and the Missouri Senate Districts for comparison and reference. The map has assisted DED in other projects involving tax credit programs. This tool saves over \$6,000 worth of DED staff time.

EMDC/Real Estate Management System

The project provides for faster front-end processing of county parcel data, an updated online mapping interface and an updated GIS server.

Hazardous Waste Interactive Mapping

The Hazardous Waste Interactive Mapping project will display the location of hazardous substance investigations and clean-up sites contaminated by hazardous waste on a Google Earth map. By statute, the Department of Natural Resources (DNR) is required to make this information available to the public by electronic means and this solution satisfies that requirement. The information is used by building contractors, land developers, inspectors, realtors and others to evaluate potential properties for possible contamination and fitness for use.

Missouri State Fairgrounds (MSF) Mapping

More accurate maps of the Missouri State Fair located in Sedalia were created by digitizing the fairground buildings and updating food and other service areas.

Women, Infants & Children Mapping

A mobile-optimized WIC location application was developed for public use.

Projects

Critical Infrastructure

The Critical Infrastructure project is in support of the Department of Public Safety (DPS). It provides a three dimensional online globe, for use by DPS staff during emergency situations, to readily identify location for communications, agriculture, law enforcement and other sectors. The data is provided through the Homeland Security Infrastructure Program (HSIP).

GeoStrat Interactive Mapping

The GeoStrat Interactive Mapping Project will display and provide access to all DNR geological data for the State of Missouri. Using a combination of technologies including Google Earth, this new website will allow public users the ability to visualize and download the DNR geological spatial data. This project will benefit internal users and public stakeholders such as environmental consultants, engineers, insurance companies and others with this data in a familiar and downloadable format that can be accessed easily in the office or field.

INFORMATION SECURITY

The Chief Information Security Officer (CISO) leads the Information Security Management Office (ISMO), which works to ensure information and information systems maintained by the state are protected and appropriate safeguards are in place to reduce potential risks. Successful information security management allows networks to operate at maximum capacity while protecting citizens' data.

Critical services performed by ISMO include:

Forensics

ISMO is one of the few entities in the state (public or private) with a computer forensics lab capable of recovering information from damaged or formatted storage devices and assisting with investigations involving computer hardware.

Internet Filtering

ISMO manages the state's Internet filter. The Internet filter not only protects the state's systems and users from malicious websites, but also assists in reducing bandwidth consumption and increasing productivity. During an average month:

- The Internet filtering system monitors over 750 million requests.
- Over 6% of all Internet requests are blocked, saving the state gigabytes in bandwidth.
- Over 2,500,000 of the Internet requests blocked are security related.

Intrusion Prevention

ISMO oversees the management of the state's intrusion prevention system (IPS). The IPS stops known malicious attacks on the state's network. In the last year 85.6 million attacks on the state network were blocked by the IPS.

Outreach & Training

ISMO communicates with state users and the general public using Twitter, Facebook and the ISMO website, cybersecurity.mo.gov. ISMO also administers regular cyber security training for state employees.

Security Architecture

ISMO provides guidance in developing and maintaining the state's information security architecture and standards.

Vulnerability Assessments

ISMO performs routine and ad-hoc vulnerability assessments against all networked assets, everything from mainframes to printers. ISMO works closely with application developers to test soon-to-be-released applications to ensure the state's information is protected.

- Assess over 30,000 networked assets on a routine basis, internal and external.
- Ultimately leads to the protection of state information as the result of ensuring assets do not have critical vulnerabilities.

NETWORKS AND TELECOMMUNICATIONS

Accomplishments

Cyber Security Training

ISMO administered SANS Securing the Human End User Training to all consolidated state agency employees. The product contains pre-recorded training video modules, quizzes, and supporting materials such as newsletters, posters and other informative items. SANS is regarded by many to be the most trusted source for computer security training, certification and research. The training product offered by SANS will take enterprise cyber security training efforts to the next level. Besides 23 cybersecurity awareness modules on topics like phishing, it also comes with 18 compliance modules including HIPAA, Federal Tax, FERPA and others.

Web Filtering Enhancement

ISMO recently upgraded the state's web filter at significant expense. This upgrade allows the state to inspect encrypted requests and responses that use Secure Sockets Layer (SSL) encryption that are denoted by https protocol in the URL of the request. This upgrade also allows the State to block requests based on the file extension of the resource being requested. This was an important feature that allowed the State to protect endpoints against the Java security vulnerabilities of 2012-2013 that resulted in security breaches for major companies like Facebook and Apple.

Cyber Storm IV

ISMO in conjunction with DPS and the US Department of Homeland Security sponsored Cyber Storm IV. Approximately 90 players, planners, and observers from a variety of Missouri state departments and agencies participated in the exercise. The exercise design team created a fictitious adversary with sophisticated capabilities to exploit a fictional vulnerability in state applications. The exercise concluded with a "hotwash" session to discuss outcomes, identify initial findings and provide an opportunity for senior leadership attending as observers to ask questions.

Projects

Data Loss Prevention (DLP)

To further protect against accidental and malicious data loss, ISMO is implementing controls throughout the network and on endpoints. These controls, managed by a Data Loss Prevention (DLP) system, shall block data from leaving the network and/or notify the appropriate agency employee when Personal Identifiable Information (PII) or other sensitive data is at risk of leaving the state's domain.

Identity Management

Enterprise identity management will allow users of state systems to access multiple systems securely and conveniently.

Intrusion Prevention System (IPS) Replacement

The State's current IPS is aging and in need of replacement. Next-Generation IPS goes beyond traditional functionality and offers greater insight and correlation to activity on the network. ITSD will procure and install a Next-Generation IPS in order to enhance security and make it more difficult for advanced persistent threats to cause a problem.

Network Access Control (NAC) Expansion

ITSD will expand its existing NAC solution, currently limited to several physical and wireless networks, to the remainder of the networks in FY 2014. NAC expansion will ensure only authorized devices are on the network. Unauthorized devices will be quarantined until they meet ITSD's standards. In addition to greater network security, NAC will also facilitate better inventory management.

Security Information and Event Management (SIEM) Replacement

As ITSD replaces the existing IPS in FY 2014, ITSD will couple it with a best in class SIEM solution. ITSD will have improved security intelligence due to the information provided by the SIEM. An upgraded SIEM solution will correlate more logs from servers, firewalls, workstations and other sources than ITSD's current implementation. In doing so, ITSD will have greater insight into the threat landscape of the state network.

The Networks and Telecommunications (ITSD-Networks) team is responsible for the communication infrastructure that provides essential support to state government agencies. Advancements by the team have enhanced business operations, making communications within state government and with Missouri citizens more efficient.

Critical services performed by ITSD-Networks include:

Capitol Campus Fiber Optic Network

The Capitol Campus fiber optic network connects major state office buildings in the downtown Jefferson City area, including the State Capitol, the Harry S. Truman Office Building, the Jefferson Office Building and the Kirkpatrick State Information Center.

Core Network (MPLS)

The core network functions as a central hub so that locations around the state can access information on the state network. In order for state employees to function at maximum productivity, the highest levels of capacity and reliability are required for the core network.

Disaster Recovery Site Connectivity

Connectivity with the State's disaster recovery site (or secondary site), in Springfield, MO, must be reliable and of sufficient capacity to allow for the replication and synchronization of data located at that site and in the State Data Center (SDC).

Internet Services

Internet access is considered an essential service to state agencies. The team provides Internet access to approximately 50,000 users across all state agencies, as well as secured access to hundreds of state government web sites via the public Internet.

Jefferson City Metro Area Ethernet Network

The Jefferson City Metro Area Ethernet Network connects buildings throughout the Jefferson City area to the Capitol Campus fiber optic network and the State Data Center Network.

Outstate Network Connectivity

MPLS, Ethernet, and broadband connectivity are provided to end users at nearly 1,100 locations across the state.

State Data Center (SDC) Network

The network structure in and around the SDC allows state employees to access data and services that are used when performing their duties.

Unified Communications (UC)

UC integrates multiple communications services including:

- Instant Messaging
- Telepresence & Video Conferencing
- Web & Audio Conferencing
- Presence
- Voice over Internet Protocol (VoIP)

This enables agencies to reduce travel, increase productivity, improve customer experience and save costs. There are roughly 17,000 VoIP customers throughout the state.

Wireless Local Area Network (LAN) Services (WiFi)

Wireless LAN (WiFi) connectivity is provided to over one thousand mobile devices on a daily basis.

Accomplishments

Disaster Recovery (DR) Network Enhancements

The DR network was upgraded from a 1 GB capacity to a 10 GB capacity to support next generation applications and development.

Network Consolidation

Consolidation of the DESE, DHSS and DIFP networks was completed in 2013.

Network Modernization and Upgrades

Network bandwidth is a key enabler of customer business strategies. Increased investments in network bandwidth enables agencies to overcome existing bandwidth constraints and focus on their next generation applications such as Enterprise Content Management. The SDC network structure has been upgraded to support next generation virtual server/storage environments, allowing for 10 GB connectivity on the backbone infrastructure. The MoBroadbandNow middle-mile providers implemented high-speed connectivity to approximately 20 state facilities in locations that include Jefferson City, Boonville, Fulton, Chillicothe, St. Joseph, and Farmington.

UC Phase III

UC Phase III resulted in nearly 2,300 phones being converted to the State VoIP in Kansas City, St. Joseph, Cameron and Warrensburg.

PROJECT MANAGEMENT OVERSIGHT

The Project Management Oversight Office (PMO) provides guidance on development and maintenance of IT contracts and assists IT project managers on the performance of their duties when necessary. The PMO also assists and advises on various IT governance initiatives.

The PMO exists to:

- Institutionalize “best practices” identified within the organization as it builds governance processes for Portfolio Management, Project Management and other functions;
- Assist with integrating and aligning project management with business operations in order to support the organization in successfully accomplishing its mission;
- Mentor and coach project managers supporting the various agencies as needed; and
- Review Project Assessment Quotes (PAQ), Requests for Proposals (RFP), Requests for Information (RFI), Requests for Quotes (RFQ), and Invitations for Bid (IFB).

Wireless Expansion

ITSD has standardized wireless access points (AP) around the state to provide controlled AP management. In the last year, over 30 street addresses and 330 APs were added to the wireless environment.

Projects

Department of Corrections (DOC) Network Refresh

ITSD began a network refresh of sixteen DOC facilities around the state. There are roughly 350 routers and switches in the sixteen facilities being refreshed. The new equipment will allow the facilities to run higher speeds across their LAN, implement power over Ethernet when needed, and reduce the number of outages experienced. Along with the network refresh, ITSD staff are cleaning up closets, removing unsupported legacy equipment, standardizing on network design, and removing vulnerable access points and devices.

DOLIR Call Center & Interactive Voice Response (IVR) Modernization

The Department of Labor & Industrial Relations (DOLIR) is upgrading Call Center and IVR solutions to ensure sustainability of the system and save money in the long term.

Critical services performed by the PMO include:

Application Portfolio Management (APM)

ITSD's application portfolio is managed using the Innotas APM software-as-a-service (SaaS). APM gives ITSD and state agency stakeholders transparency into the application portfolio. This allows the state to leverage its current software assets and save money by sharing services and application code.

Missouri Adaptive Enterprise Architecture

The goal of statewide Missouri Adaptive Enterprise Architecture is to enhance coordination, simplify integration, build a consistent infrastructure, and generally facilitate efficiencies in the development of technology solutions. The intent of the Missouri Adaptive Enterprise Architecture program is to realize these goals while ensuring effective use of state resources, thus enabling consistent, effective delivery of services to the citizens, businesses and employees of Missouri.

PAQ Oversight

The primary responsibility of the PMO Office is oversight of all Project Assessment Quotes (PAQs) that allow the state to procure services from vendors on existing state contracts. This is intended to ensure that the state receives value from the work performed and that vendors are treated fairly.

Project Portfolio Management (PPM)

ITSD's project portfolio is managed using the Innotas PPM software-as-a-service (SaaS). PPM gives ITSD and state agency stakeholders transparency into project status, risks and timelines.

Tools & Templates Repository

The PMO Tools and Templates Repository is a collection of standardized documents and procedures used for project management.

These processes and templates support ways to improve business operations (i.e., reduce delivery costs and time):

- Early identification of project issues, budget, scope and risks
- Apply knowledge that is working for one agency and may help another
- Eliminate duplication of data and processes among project managers

This site is also the source of “best practices” that, together with PMO staff, serves as a knowledge-based center, providing expertise, support and training.

Accomplishments

Application Portfolio Management (APM) & Project Portfolio Management (PPM)

ITSD's “Application Portfolio Coordinator” and the PMO implemented Innotas' APM/PPM software-as-a-service (SaaS) to better capture, store and share information about the state's application and project portfolios, with the goal of optimizing the allocation of the state IT resources.

Sharing Services and Code

ITSD enhanced a timekeeping application (ETA) so that it could be shared among state government agencies. ITSD also shared application code with the Public Service Commission and the States of Louisiana and North Dakota. ITSD received application code from the States of Kentucky, Mississippi and Tennessee.

Projects

Enterprise Architecture Refresh

ITSD maintains the Enterprise Architecture website containing documents that are reference for all existing Enterprise Architecture guidelines and standards for the state IT infrastructure. This site is reference to govern the creation of contracts related to IT work. Currently there are approximately 350 Enterprise Architecture documents being reviewed and updated.

STATE DATA CENTER

The Missouri State Data Center (SDC) is the state's private cloud and provides a cost effective, uninterrupted hosting environment to support state IT needs.

Critical services performed by the SDC include:

Data Services

The Data Services group works with the application development teams and contractors to provide a cost effective, efficient and secure database environment for the State of Missouri and its citizens.

The Data Services group maintains over 6,900 databases across six different database management systems (SQL Server, DB2, Oracle, IDMS, MySQL and PostgreSQL) with a total size of over 73 terabytes (Tb) of data.

Desktop Management and Virtualization Services

The Desktop Management and Virtualization teams support a framework of services used to manage all desktops and desktop applications. These services include Imaging, SCCM and Virtual Desktops (VDI). VDI allows end users to access their desktop from numerous types of devices such as desktops, laptops, smartphones, tablets or thin clients and from multiple locations from most broadband connections. This team also supports technologies that will assist with the delivery of these applications.

Exchange, Active Directory and Account Management Support (EADS)

The EADS team works to reduce costs through consolidation and reduction of licensing, maintenance, hardware and software related to Microsoft Exchange, Active Directory (AD) and account management. Consolidation of account management functions allows for better security through standardized processes.

The EADS team:

- Manages over 1.1 million messages sent daily
- Ensures approximately 1 million SPAM and virus laden messages received per day for state agencies are blocked and secured
- Manages the email archive of over 40 Tb, with a growth of 1 Tb every six weeks

Network Operations Center (NOC)

NOC staff is responsible for monitoring state systems and infrastructure. The NOC facilitates incident management by alerting IT staff and key stakeholders when a disruption in service occurs. NOC staff track critical incidents and create remediation reports that assist with root cause analysis and incident tracking and reporting. The NOC staff manages over 750 incidents and/or after-hours calls monthly to assist agency users with IT issues.

Operating Systems Support

The State Data Center Systems Team is responsible for the server, VDI and storage infrastructures within the primary data center in Jefferson City, the secondary data center in Springfield and other locations. This group also maintains the backup and recovery of data, and the replication of that data to the state's secondary data center for disaster recovery purposes.

The Systems Team:

- Secures and optimizes 1,700+ virtual servers
- Deployed 158 new virtual servers in 2013
- Managed 200 Tb of storage growth
- Ensures approximately 101 Tb of data is backed up daily
- Manages over 550 remote servers across the state
- Secures and applies over 100,000 patches to over 2,100 servers monthly

Print Shop

The SDC print shop produces a variety of printable items such as checks and titles including:

- Approximately 1.9 million titles printed in 2013 – approximately 7,400 titles are printed nightly, five days a week
- Approximately 1.7 million checks printed in the last year – approximately 5,357 checks are printed nightly, six days a week
- Over 56 million feet of print in 2013

Websphere, Middleware and Application Server Support (WMASS)

The WMASS team provides a reliable and sustainable middleware environment that brings applications and data together.

WMASS supports:

- Approximately 1,150 applications
- Enterprise SQL Server Reporting Services and enterprise SharePoint environment and 2,057 SharePoint sites
- Approximately 54,150,000 documents scanned into Electronic Content Management Systems per year

Accomplishments

Desktop Imaging

The Desktop Imaging Team, in collaboration with other IT teams, has improved the desktop deployment process and saved over 1,000 hours of staff time deploying new desktops in 2013.

SAN Fabric Upgrade

A Storage Area Network (SAN) fabric upgrade positions the SDC for next generation applications that require large data transfers at high speeds.

WebSphere Environment

An Enterprise WebSphere environment was established to reduce costs, improve reliability and enhance security.

Projects

Enterprise Web Services

The WMASS team is building a shared web-hosting environment for .NET web applications in order to reduce the costs of managing the web environment that currently supports a total of 207 web sites and 971 web-based applications on a total of 46 servers.

The Data Services Group works to provide a cost effective, efficient and secure database environment for the State of Missouri and its citizens.



WEB PRESENCE

The Web team provides technical support and expertise to all agencies and maintains web portals that support the state as a whole. Web team members have skills in web design, user experience, CSS, JavaScript, PHP and open-source content management systems.

Critical services performed by the PMO include:

Consulting and Web Development

The Web team provides templates and consults with other ITSD teams on design, HTML5, CSS, jQuery, user experience, mobility, PHP, Codeigniter, Wordpress and Drupal. The team is available to consult all state agencies and performs educational outreach via the Digital Media Developers (DMD) group.

Video Production

The Web team produces professional quality videos, including the "MoGov Minute."

Web Portals

The Web team manages several state web portals including:

- MO.gov, the state's citizen portal that provides a single citizen-centric view of the state's web presence.
In the past year, MO.gov received over 3 million visits and totaled over 9 million page views.
- The Missouri Business Portal, at business.mo.gov, provides resources and information for starting and operating a business in Missouri.
- The Missouri Data Portal, data.mo.gov, is a data sharing platform available to state agencies when sharing public data.

These enterprise portals make information and data from all state agencies more accessible.

Accomplishments

100 Missouri Miles

An interactive website was developed for the Governor's 100 Missouri Miles Challenge. The website promotes Missouri's outdoor recreational opportunities and encourages Missourians to exercise. More than 12,000 users have logged over 1,000,000 miles on the website. The website is integrated with social media.



APPLICATION DEVELOPMENT

Reports on application development for each of the consolidated executive departments follow in alphabetical order.

Administration

The Office of Administration (OA) provides guidance and assistance to state government entities through the implementation of Executive Office initiatives, the establishment of uniform procedures and rules, as well as providing services in a cost-effective manner.

OA Systems

OA system development and maintenance is performed by ITSD-OA programmers using the following technologies:

- Legacy Programming Technologies: COBOL, CA Gen
- Standard Programming Technologies: .NET, MS SQL

OA maintains 68 applications in its application portfolio. Below are descriptions of OA's most critical systems:

Accounting Systems (SAM II & MAP)

Statewide Advantage for Missouri (SAM II) is an accounting system that processes state transactions for purchases, payments and fixed assets reporting. It is also used to project federal grant reporting, project grant draw-downs, perform state payroll processing and other HR tasks.

SAM II is now approaching its 16th year in production. It is a COBOL/Mainframe commercial-off-the-shelf (COTS) system that has been customized for the State of Missouri and requires full-time ITSD staffing to ensure that the system is updated to comply with state and federal accounting rules and is functioning as intended.

SAM II data warehouses are updated so that other systems are able to query the large amounts of data in SAM II. The Missouri Accountability Portal (MAP) uses the data warehouse to present financial information to the public, allowing citizens to track how the state is spending taxpayers' money.

In the past year, SAM II processed more than 95,000 purchase orders, processed more than 1,130,000 payment vouchers, printed over 458,900 payments to vendors by check, created over 611,400 direct deposit payments to vendors and processed more than 1.3 million payroll checks.

Bidding System (OLB)

The Online Bid (OLB) system is a web-based statewide bid system used by agencies to solicit and receive bids and make awards. Businesses are able to register as a state vendor and identify the commodities they provide.

Almost 9,200 vendors are registered to use the site; close to 3,500 new or updated registrations were received over the past year; 494 bids were posted and close to 1,900 bid responses were received.

OLB, along with other small systems and paper-based processes, is a candidate for replacement with a modern eProcurement system when funding becomes available.

Budgeting System (BRASS)

BRASS is the system used to develop state agency budgets during the state's budgeting process every fiscal year.

Charitable Campaign System

The Missouri State Employees Charitable Campaign (MSECC) system is used by state staff to manage charity and donation data for the annual campaign.

Employee Performance Appraisals System (PERfORM)

PERfORM is used by 6,600 state employees to create performance objectives, create annual performance appraisals and special appraisals. In the past year 33,280 annual appraisals were created.

Employment and Personnel Systems (EASe, MAIRS & JOA)

The Electronic Application System (EASe), Management and Applicant Information Resource System (MAIRS) and Job Opportunity Announcement (JOA) software combine to support the Missouri Merit system.

The JOA system displays a listing of open merit registers. Merit System job applicants use EASe when applying to be added to a Merit register. EASe collects pertinent employment information about an applicant. Depending on the job class applied for, EASe also determines the applicant's rating of their education and experience based on their responses to a series of questions. MAIRS, together with EASe, is used to process Merit System applications, schedule and score tests, fill registers, create certificates and track dismissals.

MAIRS is based on the legacy CA Gen technology and is a candidate for replacement by a modern system when resources become available.

Tax Assessments System (STC Assessments)

The State Tax Commission (STC) Assessments system is used to assess and report on the value of property held by utilities and railways.

Time and Attendance (ETA)

The Enterprise Timekeeping Application (ETA) has allowed the state to retire redundant electronic systems and eliminate some paper-based systems. It is used by state employees to code time to specific activities (projects) and track leave.

Vehicle Fleet Management Systems (FLEET & CARS)

FLEET tracks state vehicle information and CARS allows state employees to reserve a car for state use.

Workers' Compensation System (RISK)

RISK is the system used to track workers' compensation claims by state employees. RISK is a CA GEN system that is being replaced by RESTORE and will be retired in 2014.

Accomplishments

Asset Tracking System (iTrack)

iTrack is an enterprise asset tracking system developed by the ITSD-DOR team that allows end-users of IT equipment to self-report the IT assets they are using. The system replaced a labor-intensive inventory process.

Capital Improvement Budget Requests (CIBR)

An Access-based system was rewritten as a web-based system that eliminated many manual processes for each state agency and for OA-FMDC.

EASe Rewrite Phase I

Phase I of the EASe rewrite made EASe accessible on all desktop platforms and in all browsers. It enhanced its usability for persons using screen readers. Changes were also made to EASe that simplified the handling of data and reduced data redundancy, complexity and maintenance.

Employee Self-Service (ESS) System Enhancements

ESS was enhanced to allow the employee to request name and address changes via the system.

Enterprise Timekeeping Application (ETA) Phase 2

ETA is used by state employees to collect and report employee hours including task hours worked and leave hours used. State agencies are being migrated from paper and duplicative systems to this enterprise system. ETA has 1,825 active users now, compared to 900 last year.

MAP Enhancements for HB116

Three enhancements were made to MAP in response to the passage of House Bill 116. One feature allows citizens to view expenditure restriction information by the agency in which appropriation authority was restricted, the fund in which appropriation authority was restricted, and the amount restricted and/or released. Another feature allows citizens to view federal grant information by the state agency in which federal grants were received, the

federal agency from where the money was received or by completing a key word search of the grant purpose. A third feature allows citizens to view information about public bonds in Missouri.

OA Website

The OA website, oa.mo.gov, was re-developed by the ITSD-Web and ITSD-OA teams in the Drupal open-source content management system so that non-IT staff members are able to update content when appropriate.

Projects

eProcurement

In order to achieve greater procurement efficiency and savings for taxpayers and stakeholders, the state could invest in a modern eProcurement system. Modernization would help eliminate complexities in the purchasing system and provide greater capabilities not only to the OA's Division of Purchasing and Materials Management (DPMM) but also to other state agencies, local government entities, and the vendor community.

- Implementing a new eProcurement system would:
- Increase fiscal accountability and transparency.
- Improve purchasing power
- Modernize purchasing operations, streamline processes and cut costs
- Enable state agencies to search and find vendors more efficiently
- Improve access to business opportunities for small, women-and minority-owned businesses
- Provide greater access and better purchasing opportunities for local governments
- Improve contract compliance
- Use business intelligence to improve spending practices

Job Application System

An enterprise job posting system will be developed as a shared service for agencies wishing to participate. Agencies will be able to post job opportunities directly or utilize a web service. This is the first phase of a multi-year project.

Lease Management System

The system that allows FMDC to manage facility leases will be modernized in order to ensure its sustainability into the future.

Workers' Compensation (RESTORE)

The Risk Enterprise System to RESTORE Employees (RESTORE), which manages workers compensation claims for employees of several state agencies and universities, will be implemented in early 2014. Created using the .Net platform, RESTORE will replace the Risk Management System that has been in use since 1993 and is based on block mode, green-screen technology that is now outdated.

RESTORE will provide new and improved functionality in the areas of payments, claim subrogation and claim event documentation, streamline federally required Medicare reporting, eliminate paper-based processing for claim forms and settlement negotiations, and enhance the ability to track trends and manage costs efficiently and effectively.



MOST POPULAR

- State Job Opportunities
- OA Job Opportunities
- State Holidays
- Current Bid Opportunities
- Surplus Property
- Employee Benefits
- Statewide Advantage for Missouri (SA)

AGRICULTURE

The Missouri Department of Agriculture's (MDA) mission is to serve, promote and protect the agricultural producers, processors and consumers of Missouri's food, fuel and fiber products.

MDA Systems

MDA systems development and maintenance is performed by ITSD-MDA programmers using the following technologies:

- Legacy Programming Technologies: Access, AS/400, dBase
- Standard Programming Technologies: .NET, MS SQL, MS SharePoint

MDA maintains 61 applications in its application portfolio. Below are descriptions of MDA's most critical systems:

AgriMissouri System

The AgriMissouri system is used by Agriculture Business Development (ABD) to manage AgriMissouri memberships and business profiles of local food producers. The system exports business profiles to the AgriMissouri website where consumers can search for local foods and agritourism facilities. There were more than 1,881 members and 281 farmers' markets registered in 2013.

Animal Care System

The Animal Care System is used to ensure that dogs and cats, specifically those under the care of breeders, pet sitters, intermediate handlers, dealers, exhibitors, hobbyists, boarders, retail pet stores, animal shelters, rescue operations and municipal pounds, receive adequate care, shelter, health care and proper socialization. The Animal Care System is used on laptops by Animal Health Division to capture information on routine inspections, complaints and inquiries while in the field. The system is used in the office for data processing to issue licenses and maintain data and enforce mandated regulations. More than 2,100 facilities are licensed and or registered by the department annually.

Feed and Seed System

The Feed and Seed System helps the Plant Industries Division ensure correct labeling on packages of feed and seed. More than 55,000 feed and seed laboratory test results are managed via the system annually.

Fuel Quality System (FQLIMS)

The Fuel Quality Program, part of the Weights and Measures Division, administers the fuel quality law through inspection, analysis and enforcement to help ensure consumers are purchasing quality motor fuels. Fuel samples are collected by field personnel and submitted for testing. The petroleum laboratory analyzes gasoline, kerosene, heating fuels, diesel fuels and alternative fuels including biodiesel and E85 fuel ethanol to make certain they meet state quality and safety standards. There are more than 9,000 samples obtained and tested through fuel quality inspections annually. The system manages sample results.

Pesticides System

The Pesticide Program helps prevent the adverse effects of pesticides on human health and the environment. The program also licenses pesticide applicators and dealers, registers pesticides and performs inspections and investigations in the enforcement of the Missouri Pesticide Use Act and the Missouri Pesticide Registration Act. The Pesticides System is used by program staff.



Petroleum Station Inspection System

This system maintains data on safety and device inspections of above ground storage tanks, service stations, refined fuels bulk storage facilities, marinas, airports, barge and pipeline terminals, bulk delivery trucks and other retail/wholesale locations. Currently, the Weights and Measures Division regulates nearly 3,700 facilities of various types.

USA Herds

USA Herds is Commercial-Off-The-Shelf (COTS) software that allows the Animal Health Division to track livestock and poultry in Missouri, helping to ensure that our food supply is safe. Components include veterinarians, premise reports, animal brands and livestock import/export. There are more than 22,120 premise reports and 4,620 animal brands in the system.

WinWam

WinWam allows Device and Commodity inspectors to capture field inspections electronically. Data from more than 8,500 inspections is entered into this system annually.

Accomplishments

Feed and Seed Samples Publishing

This project automated the process that publishes feed and seed sample results to the web. This eliminated mailings that cost \$3,270.72 annually.

Grain Business Licensing System Modernization

ExamHand software was purchased and implemented for use by MDA grain warehouse inspectors. ExamHand replaced two AS/400 systems and a paper process making it easier for MDA to license and audit Missouri's grain businesses.

Motor Oil Sampling System (MOSS)

This new system captures motor oil sample information and lab test results. Inspection data is entered into the system in the field. This has replaced a labor-intensive method, reducing processing times.

During the first full year of collecting and analyzing motor oil samples, inspectors will collect approximately 1,200 motor oil samples and the chemist will perform at least two tests on each sample. Benefits of MOSS include:

- Improved data integrity and analytics
- Automated reporting
- Increased productivity
- Reduced paper costs

Pet Food Data

This consumer protection program takes random samples of retail pet food and performs analysis on it to determine the accuracy of actual ingredients versus what the label advertises. This small project made pet food data available to MDA field staff via the web, saving the cost of printing and mailing 7,000 pages of pet food data annually.

Projects

Fuel Quality (FQLIMS)

The new FQLIMS application for MDA's Fuel Quality Program will replace a legacy dBase application used to adminis-

ter the fuel quality law and help ensure consumers are purchasing quality motor fuels. The new ScanGas and ScanDiesel .NET application will enable staff to quickly scan and test petroleum samples for compliance in order to quickly stop the sale of any product found not to meet specifications. The application will replace a legacy system to improve productivity during the testing of approximately 7,800 samples annually.

Market News Website

The new online home for the MDA's Market News Program will provide livestock producers, marketers and buyers the tools and information necessary to make sound business decisions in a more easily accessible format. Visitors will be able to compare livestock prices with color-coded graphs, listen to audio reports and browse the Missouri Hay and Livestock directories from a variety of devices.

MDA Web Forms

The MDA Web Forms project will enable customers to submit 57 forms and corresponding payments electronically. This will increase citizen access to services, reduce processing times and increase MDA staff productivity.

USAHerds Enhancement

USAHerds will be enhanced to integrate the functionality now offered by the Animal Care System.

USALims

USALims is a laboratory information management system designed to replace a legacy AS/400 system. The system will manage data related to specimens, accessions, test results, etc. It provides automated report generation, distribution and auditing.

USAPlants

USAPlants is a system for managing licenses, certificates, and laboratory testing related to the plant industry. When fully implemented it will replace seven AS/400 applications and help automate seed and fertilizer registration and oversight.

CORRECTIONS

The Missouri Department of Corrections (DOC) supervises and provides rehabilitative services to adult offenders in correctional institutions and Missouri communities to enhance public safety.

DOC Systems

DOC system development and maintenance is performed by ITSD-DOC programmers, DOC offenders and contractors using the following technologies:

- Legacy Programming Technologies: RPG/AS400
- Standard Programming Technologies: Java

DOC maintains 31 applications in its application portfolio. Below are descriptions of DOC's most critical systems:

Law Enforcement Notification System (LENS)

LENS is a system for law enforcement agencies that allows authorized users to run an inquiry on any offender under the supervision of DOC through a secure internet connection at no cost. Basic identifying information, current offense, current location or last known address and supervision contact information are a few examples of the information available. In addition, agencies may subscribe to receive electronic notification when selected events of interest occur during a specific offender's incarceration, such as upcoming parole hearings, escapes and releases. LENS has 306 agencies enrolled, 4,083 agency users enrolled and 6,767 subscriptions to events.

Offender Management Systems (ARB, MoCIS & OPII)

DOC utilizes offender management systems including OPII, MoCIS and ARB to manage offenders both in Missouri institutions and in the community. OPII has been in production since 1998 and is a RPG/AS400 based system that is customized to the DOC business processes. OPII contains 577,600 total offender records and 120,394 active offender records. MoCIS will eventually replace OPII.

Automated Road Book (ARB) allows Probation and Parole staff to log case notes for offenders under their supervision. Through ARB, over 2 million user-entered case notes are recorded annually.

Puppies for Parole System

The Puppies for Parole program is a partnership between DOC and animal shelters in which offenders train dogs to increase the likelihood that the dogs can be adopted. The Puppies for Parole system tracks animal shelters and dogs participating in the program. It also includes a public-facing application to promote the dogs that are actively being trained so the general public can view the dogs available for adoption.



Accomplishments

Corrections Officer I (CO I) Online Applicant System

The CO I Online Applicant system provides DOC the ability to maintain and manage information regarding CO I applicants, testing dates, testing locations and testing results to assist DOC with hiring, reporting and tracking of CO I applicants. This system includes a public facing web-based application available for the general public to apply for the Corrections Officer I position. The new system:

- Reduces waiting times for applicants to take the CO I test by up to six weeks
- Reduces the burden of submitting a paper application
- Helps shorten hiring timeframes
- Saves ITSD staff time by allowing users to troubleshoot errors

MoCIS Earned Compliance Credit Calculations

MoCIS was modified to calculate the earned compliance credit for offenders under the supervision of Probation and Parole (P&P) that was established by House Bill 1525. This ensures the accuracy of calculations and limits the impact on DOC staff.

MoCIS Programs Module

The Programs module of MoCIS was implemented during 2013. This module replaced Program Tracking in DOC's legacy Offender Management System, OPII. The new system is a more efficient way to track offender participation in classes, residential facilities and supervision enhancements. The data collected can also be used to determine which programs are most effective in rehabilitating offenders.

Projects

MoCIS Module for Healthcare

DOC is statutorily obligated to provide basic health care at the same level as the non-incarcerated community. The MoCIS Healthcare module will be implemented in 2014 and is comprised of four areas of care: medical, mental health, substance abuse treatment and sex offender treatment.

MoCIS Module for Visitations

DOC encourages visitation of incarcerated offenders by family and friends as it promotes rehabilitative efforts. This MoCIS module will allow DOC to capture pertinent information from persons requesting to visit an offender and reduce request processing time for citizens and DOC staff.

A second system is designed to enhance safety in facilities ensuring visitation privileges are granted appropriately. One global visitor record will capture and track all visitation privileges of any person, improving staff productivity and effectiveness.

ECONOMIC DEVELOPMENT

The Department of Economic Development (DED) leverages our competitive advantages and delivers strong economic growth for Missouri.

DED Systems

DED system development and maintenance is performed by ITSD-DED programmers and contractors using the following technologies:

- Legacy Programming Technologies: COBOL, PL/SQL, PERL
- Standard Programming Technologies: C#.NET, VB.NET, MS SQL, Oracle

DED maintains 40 applications in its application portfolio. Below are descriptions of DED's most critical systems:

Jobs System (Jobs.mo.gov)

Jobs.mo.gov is DED's Division of Workforce Development (DWD) labor exchange system and public job bank website. It is an electronic job board (much like Monster or Career Builder) allowing employers to post jobs and search for suitable candidates and job seekers to post their resumes and find employment.

Tax Credit System (Customer Management System - CMS)

CMS is the primary system for DED to track awarded and redeemed tax credits. Currently all of the state's tax credits are tracked via CMS, with the exception of those belonging to the DIFP and DOR. There are 75 tax credit programs from five departments in the system.

Tourism Website

VisitMO.com is a critical component in Missouri Division of Tourism's (MDT) effort to bring tourists and tourism dollars into Missouri. The website allows users to find desirable attractions and events through an appealing and accessible design. The website is operated by MDT with support from a contracted partner. There are also a number of ways that tourists can interact with MDT through social media. Tourism-related businesses are able to upload profiles and events and market their businesses.

Utility Rates and Hearings (Electronic Filing and Information System - EFIS)

EFIS is a public, web-based document management system that integrates automated process management, imaging and content management into a central electronic repository for commission cases, complaints, inquiries, tariff/rate case filings, staff reports, commission agendas and orders. The EFIS application accommodates approximately 7,000 internal and external users.

Weatherization (MoWAP)

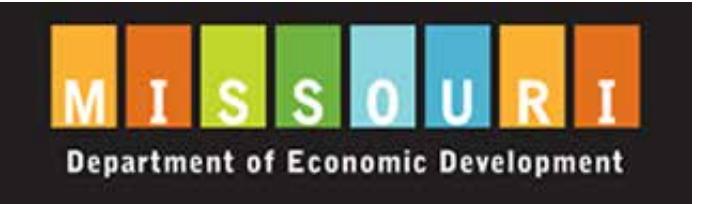
The Division of Energy currently manages grant funding dedicated to assisting low-income families with weatherizing their homes. The Missouri Weatherization Assistance Program (MoWAP) allows staff to review invoices for funds and approve payment through SAM II.

Workforce Information Database

The Missouri Economic Research and Information Center (MERIC) uses the Workforce Information Database to maintain and update employment statistics, labor market information, business listings and related economic and demographic data.

Workforce Programs System (Toolbox2 - TBS)

TB2 is the case management system used by DED staff and its Workforce Investment Board (WIB) partners. It allows them to manage the enrollment of job seekers in state and federal workforce programs (for example, WIA, Wagner Peyser, TRA and METP) and track the use of services provided under these programs. This third party Oracle-based software has been heavily customized for use in Missouri and is a candidate for replacement.



Accomplishments

Employer Request for Training Application (ERTA) System Enhancements

The ERTA application is used by program administrators when assisting Missouri businesses through the Missouri Customized Training Program. Local educational agencies may enter and submit the Employer Request for Training application for the Missouri Customized Training Program to the Division of Workforce Development on this site.

ERTA system enhancements included:

- File upload capabilities – Added the functionality to allow the 400+ companies who submit ERTA applications each year to upload their documentation and requirement information electronically instead of emailing or faxing back to the ERTA administrators.
- File reimbursement requests – Companies can request reimbursements for training they have completed. These reimbursements can now be submitted electronically instead of through email or fax. Prior to adding this functionality, DWD staff would email the reimbursement forms to the program administrators and then wait for the forms to be returned to them. Program administrators can now file these electronically shortening the approval time period; they also have the ability to submit multiple reimbursement requests at one time.

In addition to improving the program management process, these enhancements have saved 2 full time staff on average 1 1/2 hours each day during the 4 month time period that applications are accepted.

Enhanced Enterprise Zone (EEZ) System Modernization

DED administers the Enhanced Enterprise Zone (EEZ) tax credit program. EEZs are specified geographic areas designated by local governments and certified by DED. Eligible businesses can receive tax incentives for locating or expanding operations in distressed areas.

This project modernized the EEZ system from Access to .NET technology and allowed the system to scale to support future enhancements including mapping capabilities.

The determination and certification processing time has decreased with the implementation of this new system. On average, 3 days were required by 1 full time staff member to determine qualification for each proposed Enhanced Enterprise Zone with the previous system. After implementation of the new system, average qualification time has been reduced to 2 hours or less, enabling a backlog of 24 proposed EEZ's to be processed in 2 weeks rather than the 3 months it would have taken with the old system.

Jobs.Mo.Gov

New components of the website include:

- Message Center – A message center was developed within Jobs. Mo.Gov that sends recruitment, job searches, job matching and product cross-outreach notifications to registered job seekers and employers. Since implementation of the message center in January of 2013, 717,000 message center notifications have been sent, contributing to an 11% increase in new visits to the Jobs. Mo.Gov site based on pre-message center implementation site analytic counts.
- Twitter – Twitter job notification functionality based on job seeker and employer job order matches was added. New job orders are provided hash tags based on geographic area as

well as specific industry classifications and tweeted from the @JobsMoGov Twitter account. Since launch, more than 24,000 job order tweets have been posted and 505 new Twitter followers have been added to Jobs.Mo.Gov.

Projects

Export Missouri Portal

The Export Missouri Portal will include an online Business to Business Directory (B2B), Online Trade Counselor, and Qualified Lead Program. These web tools will make foreign offices more effective in communicating with Missouri companies about global opportunities.

DED will save an estimated \$122,500 annually in FTE hours and allow the DED international sales team to focus more on their core responsibilities of trade counseling exports development.

CMS Re-write and Replacement

CMS is increasingly cost prohibitive to maintain. CMS system modernization will ensure its security and sustainability into the future.

DWD Cost Accounting System

DWD's current cost accounting/allocation system is a legacy COBOL mainframe application. DWD uses this system to track all Federal grants and revenue sources. The new system will improve functionality and modernize the technology.

Work Opportunity Tax Credit (WOTC) Modernization

The existing WOTC (Work Opportunity Tax Credit) system is used to accept, monitor and track the hiring of applicants from 14 targeted group facing barriers to employment. DED, through its Division of Workforce Development (DWD), administers the program in the state of Missouri. The current system is a COBOL legacy mainframe system that will require major system enhancements to stay compliant with U.S. Department of Labor guidelines. The objectives and goals of this project are to implement and modify the .Net based application that Missouri received from Kentucky to meet the operational needs of Missouri's program, while meeting compliance guidelines and improving program management through technology advancements.

Workforce Data Quality Initiative (WDQI) Phase 2

The WDQI web portal is an innovative Training-to-Work Exploration web tool that is being developed to assist students, job seekers and educators to better understand the connections between training choices and work outcomes. This system allows the public to select from over 200 training programs and see, by degree level, what graduates make in wages and in what industries they are employed in Missouri.

The WDQI portal was made possible thru collaborative efforts of several state agencies. Missouri is the first state to accomplish the combination of workforce and education data and demonstrates how efforts like this can give citizens more power to make better informed decisions.

Workforce Programs System Replacement

The current Workforce Programs System, Toolbox, is unacceptable. Functionality is less than desirable and the system is difficult to maintain and modify. A modern system should increase program effectiveness and reduce the total cost of ownership.

ELEMENTARY and SECONDARY EDUCATION

The mission of the Missouri Department of Elementary and Secondary Education (DESE) is to guarantee the superior preparation and performance of every child in school and in life.



DESE Systems

DESE system development and maintenance is performed by ITSD-DESE programmers and contractors using the following technologies:

- Legacy Programming Technologies: None
- Standard Programming Technologies: .NET, MS SQL

DESE maintains 45 applications in its application portfolio. Below are descriptions of DESE's most critical systems:

Adult Learning Systems (GED & AWARE)

The GED system, developed in-house on the Microsoft .NET platform, allows individuals, colleges, universities, verifying services and employers to view GED transcripts and individuals to make GED payments. AWARE is third party software that allows Vocational Rehabilitation (VR) staff to effectively track, coordinate, communicate, analyze, plan and budget complex services for approximately 141,500 VR open and closed cases to assist with annual federal reporting requirements.

Core Data Application

The Core Data application is a centralized portal through which Local Education Agencies submit their educational data to DESE.

Educator Certification System

The Educator Certification System allows educators to submit online applications for certification. It gives educators and administrators the ability to upgrade certifications and allows schools and districts to access the certification information they need. In the past year more than 42,050 certificates have been processed online.

Electronic Payments and Electronic Grants Management System (ePeGS)

ePeGS tracks budget, plans and expenditures for all grants, and creates grant payment data.

Foundation Formula System

The Foundation Formula System is critical for maintaining and calculating the factors involved in State of Missouri payments to Local Education Agencies.

Missouri School Improvement Program System (MSIP5)

The MSIP5 program works to prepare every child for success in school and life. MSIP5 is the state's school accountability system for reviewing and accrediting public school districts in Missouri. MSIP began in 1990 and is entering its 5th version this year.

Payment Management System (PM)

The Payment Management system is the mechanism used to create and process payment documents to school districts at least once a month. Subsystems that process payments to be paid in a particular month are ePEGS, School Foods, and School Finance. Sections have the ability to process manual payments in Payment Management for those programs that are not part of a subsystem. DESE processes \$380,000,000 in payments per month through the Payment Management System.

School Data Systems (MCDS & MOSIS)

The Missouri Comprehensive Data System (MCDS) allows the public to view data on Missouri's school districts and students on the MCDS public website. MCDS also has an internal component for DESE staff and a secure extranet for school districts to view data. MCDS runs on the Microsoft SharePoint platform.

The Missouri Student Information System (MOSIS) is third party software that allows school districts to upload data to DESE and allows DESE to manage that data.

Security System and User Manager

The Security System is the core security application that, with the help of Active Directory, controls authentication of over 96,000 user accounts. In addition, the application interfaces with each DESE web application to manage content visibility within the secured environment.

User Manager is an application which contains a front end allowing security administrators the ability to grant and remove security privileges, unlock inactive accounts, and initiate password resets. It allows for role based security down to the district level in some cases of a subsystem. DESE processes \$380,000,000 in payments per month through the Payment Management System.

Accomplishments

Call Tracking Application

The Call Tracking application was developed for the Special Education Division. This division has a call center that utilizes the application to gather detailed information for specific calls that are taken. Staff can now search the system for previous calls, create new calls, or transfer calls to other staff members through this application. The ability to search calls by specific criteria and matching features has given the team the opportunity for faster service and ease of support to their callers.

Electronic Payments and Electronic Grants Management (ePeGS) Enhancements

Several enhancements to the Electronic Payments and Electronic Grants Management System (ePeGS) system were implemented. These included enhancements to the Special Education Grant system, ePegs LEA Planning Tool, and ePegs Schoolwide Pool. These changes improved district usability, reduced duplication, created accurate views of funds, and increased reporting capabilities. Functionality of the Parents as Teachers (PAT) system was also incorporated into the ePeGS system allowing the PAT system to be retired. This created efficiency when validating certified parent educators, reduced the number of applications required to support this program, reduced the cost of support and allows for easier maintenance to the application.

Missouri Commission for Deaf and Hard of Hearing (MCDHH) Website Redesign

The project redesigned MCDHH.mo.gov to improve the usability of the website and add more links to online resources for constituents. The website utilizes a content management system so that content may be updated directly by MCDHH.

Missouri Learning Standards Website

The Missouri Learning Standards were created to define the knowledge and skills students need in each grade level and course for success in college, other post-secondary training and careers. These grade-level and course-level expectations are aligned to the Show-Me Standards. This new website, MissouriLearningStandards.com, provides access to information in a central location for parents, students, teachers, community members and administrators.

Prop C Compliance System Modernization

The Proposition C Compliance calculation is a process used to determine whether each district is in compliance with their Proposition C Waiver requirements. The system provides

precalculated numbers for district use in obtaining their tax reporting numbers; statutorily required per Section 164.013 RSMo. The PROP C Compliance system was modernized from a FoxPro to .NET platform for maintainability and ease of support. Reports were also created on a SSRS platform. Additional enhancements were made to the system which included maintenance pages for DESE staff, reports, and automated letters to the districts. This created efficiencies for DESE and ITSD as this was previously a manual process. ITSD is no longer required to be involved in the yearly rollover process or running reports.

Regional Professional Development Center (RPDC) Consultant Logs

The Office of Special Education (OSE) contracts with Regional Professional Development Centers (RPDC) to provide assistance to school districts for the purpose of increasing student performance. With this new system, DESE has the ability to collect meaningful data necessary to monitor RPDC consultant time spent on contract work, evaluate initiative effectiveness, and link student performance to department initiatives. Overall, the new system saves hundreds of hours in RPDC contracted time each week.

Reporting Platform Standardization

This project consolidated and standardized all DESE reports onto a common development platform (SSRS). This standardization results in licensing cost savings of \$90,000 and cost avoidance of \$6,000 annually. It also increases the productivity of ITSD-DESE developers, making it easier to integrate systems and report data.

Survey Tool

Surveys are sent via web to VR clients requesting information on their experiences with VR services and staff. This project enables the Vocational Rehabilitation (VR) team to load results from a Survey Monkey web based system into the VR Survey database, add manual survey responses and view reports of combined results.

School Foods Application Enhancements

Numerous enhancements were made to the School Foods application including new pages created to upload required USDA information, enterable forms using USDA validation worksheets, and several updates to current review processes using new forms and information from USDA. In addition, several reports were modified or created to meet new USDA rules. Enhancements for usability within the system were also part of this project.

Projects

AWARE Enhancements

Vocational Rehabilitation (VR) would like to create a Vocational Planning Guide (VPG) report in AWARE to streamline the process of providing vocational planning information to the Community Rehab Program service providers. This will expedite critical client information and enhance the timeliness of service delivery to VR clients by automating a manual process. By creating this report, VR will see time savings of potentially 1000 hours per year for their counselors.

Enhancements to the Cost Scenario page in AWARE will create authorizations from the AWARE Cost Scenario. VR will be able to manage annually-reviewed, vendor-specific rates in AWARE and view rates in a report. This will allow their staff to compare the vendors, programs and fees to make informed decisions within the Cost Scenario page. Additional Cost Scenario page enhancements will provide VR an agency-wide Cost Scenario template. Staff will be able to make changes to the template as needed and publish to their own reporting structures. By using Cost Scenario templates, VR staff gain efficiency.

Charter Expansion

SB 576 allows any district to create a charter school. This project will modify DESE systems to create a charter school.

DESE Website Redevelopment

The DESE website, dese.mo.gov, is being redeveloped in the Drupal open-source content management platform. The project will also standardize the website on the mo.gov theme and improve usability.

Educator Certification Enhancements

DESE issues certificates to all educators who work in the state's school systems and also assists with the review of certificate holders who are charged with misconduct. The Educator Certification System will be enhanced to improve usability, reduce ITSD involvement related to currently known system bugs, and reduce phone calls to DESE staff related to educator certification.

Enterprise Content Management for Vocational Rehabilitation

This project will perform detailed discovery for an Electronic Content Management (ECM) solution. This will include Human Resources and Accounting documentation. It shall include defining document types, indexing, retrieval methodologies, storage administration, desired workflow configuration and user security. Future ECM solutions may be applied to the AWARE system.

ePeGS Enhancements

Enhancements are being made to Parents as Teachers (PAT), a subsystem of ePeGS. This will allow DESE to determine payments due to districts for PAT. In addition, new pages will be created for grant maintenance and final reports. New reports in both (PAT) and ePeGS are being created to show the summary and detail of payments waiting approval. This project will also automate the Special Education Prop Share Carryover request which currently is a manual process.

High School Equivalency Test System (HiSET)

DESE has contracted with Educational Testing Service (ETS) to begin using a new set of High School Equivalency Tests (HiSET) beginning January 1, 2014. The GED standard is being replaced by the HiSET standard. As a result of that change, the current GED system is being modified to accept these new tests. This change will allow DESE to stay in compliance with Missouri law to provide a HiSET to Missouri citizens and continue to house and report HiSET certificate data for the public.

Payment Management (PM) Analysis

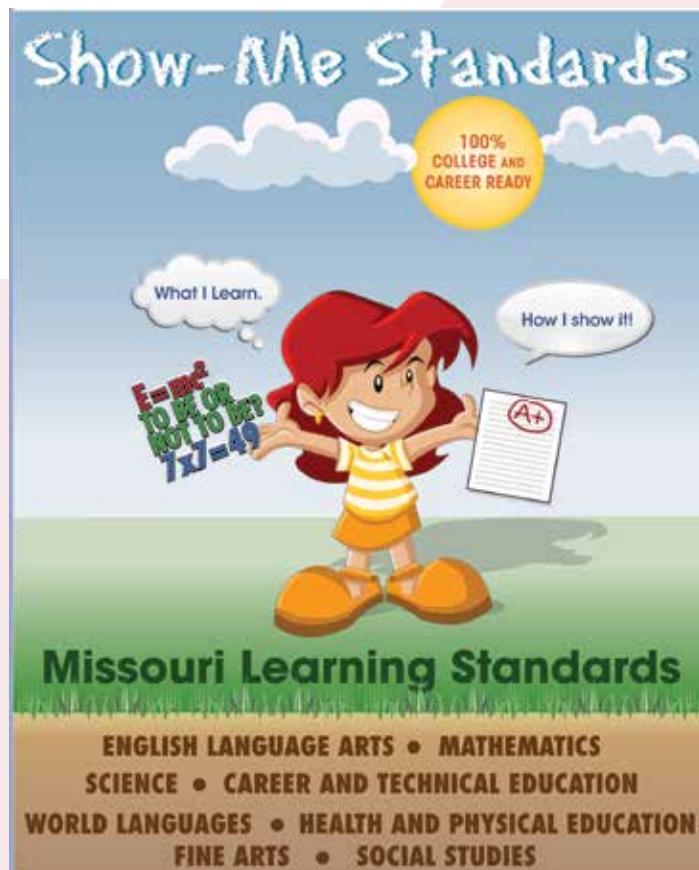
The Payment Management (PM) system processes over \$380,000,000.00 in payments to over 500 school districts monthly. ITSD is working with DESE on a phased approach to a re-write of the Payment Management system. The re-write includes updating security, automating processes and modifying PM to handle daily payments. This project is part of DESE's Strategic Plan to improve efficiencies and remove risks. The first phase is a focused timeframe to analyze the current system, gain an understanding of PM processes, risks and enhancements needed to set appropriate timelines for the project going forward.

School Foods System Enhancements

Enhancements to the School Foods system will create and modify many existing reports, generate automatic letters and emails, and track communication. These updates are required to meet new USDA rules and requirements.

Security System Enhancements

These enhancements will give DESE and public school districts additional control and flexibility in respect to access of various levels of sensitive data.



HEALTH and SENIOR SERVICES



The Department of Health and Senior Services (DHSS) is the leader in promoting, protecting and partnering for health for Missouri.

DHSS Systems

DHSS system development and maintenance is performed by ITSD-DHSS programmers using the following technologies:

- Legacy Programming Technologies: COBOL, CA Gen
- Standard Programming Technologies: .NET, MS SQL

DHSS maintains 141 applications in its application portfolio. Below are descriptions of DHSS' most critical systems:

Immunizations System (ShowMeVax)

ShowMeVax is used by health care providers to view, record and track immunizations in the state immunization registry for clients they serve. There are 4,661 users from 1,189 health providers, local public health agencies and schools throughout the state utilizing the registry.

Missouri Electronic Vital Records System (MoEVR)

MoEVR supports registration of Missouri vital events for the department and other users such as funeral directors, attending physicians, medical examiners and birthing facilities.

Public Health Event Detection (ESSENCE)

The Electronic Surveillance System for the Early Notification of Community-based Epidemics (ESSENCE) system inputs electronic emergency department (ED) data for the purpose of syndromic surveillance. Syndromic surveillance is the use of non-traditional data sources to detect public health events earlier than possible with other methods. Examples of syndromic surveillance data include over-the-counter drug sales, laboratory report orders and absenteeism rates. Missouri conducts syndromic surveillance using electronic hospital emergency department (ED) visits. ESSENCE can also be used for situational awareness during known health events by querying all ED visits for a particular syndrome or by keyword (such as carbon monoxide, animal bite, injury, etc.). There are currently over 400 users of ESSENCE throughout the state who are either public health authorities or staff from hospitals that send electronic emergency room data.

Women, Infants and Children (WIC) Information Network System

The WIC Information Network System allows DHSS to certify and issue benefits, food and nutrition education to categorically eligible women, infants and children.

Accomplishments

Certificate of Need

Certificate of Need is designed to restrain unnecessary health care expenditures while addressing issues of community need, accessibility, financing, and high health costs. One way the program does that is by surveying the number of licensed beds available in Residential Care Facilities, Assisted Living Facilities, Intermediate Care Facilities and Skilled Nursing Facilities. A survey is taken on a quarterly basis to determine percentage of occupancy and deficits in available licensed beds per county. Prior to September 2013, all surveys (1,100 per month) were submitted on paper by both mail and fax. A new web application allows Missouri care facilities to submit their quarterly surveys online. This improved process eliminates cost of mail preparation, manual data entry by staff and reduces risk of human error.

Contractor Invoicing - MOPHIRS

(Missouri Public Health Invoicing & Reporting System)

DHSS contracts with Local Public Health Agencies (LPHAs) to provide public health services throughout the state. MOPHIRS was developed to improve the department's ability to manage billing for more than 300 contracts with a total value of \$13,021,456 per year. ITSD DHSS automated the manual/paper system saving approximately 250 staff hours per year.

Electronic Laboratory Reporting

Beginning in the spring of 2013 the DHSS Disease Surveillance System began receiving lab reports electronically via HL7 messages from commercial laboratories. Previous paper and manual processes were eliminated saving approximately 500 staff hours in the first six months. The Bureau of Communicable Disease Control and Prevention, Bureau of HIV, STD and Hepatitis and the Office of Veterinary Public Health will no longer provide hard copies of disease reports.

Missouri Child Care Inspection System (MOCCIS)

DHSS Child Care team is required to inspect and monitor child care facilities around the state ensuring licenses are up to date and the facilities are in compliance with state statutes and licensing rules. One component of MOCCIS is a mobile application that allows inspectors to complete electronic data entry for the inspections on tablets in the field, saving approximately 8,000 hours per year in manual data entry. Once reviewed by a supervisor that data is then displayed on the public-facing Childcare Portal.

Projects

Missouri Information for Community Assessment (MICA) Modernization

MICA is a web-based data query system for health statistics and data. Broad coalitions of stakeholders rely on MICA as their primary source for obtaining accurate, reliable health statistics for the state of Missouri and its 115 counties. Legislators, consumers, health care providers, business coalitions, local public health agencies, community organizations, health programs, community planners, researchers and other state agencies use the MICA tools for a myriad of reasons including conducting health assessments, to seek federal and other sources of funding, and to measure and evaluate progress of current initiatives. Modernization of this legacy system will create common data architecture for accepting and disseminating data for public health programs.

Vaccines for Children (VFC) Vaccine Ordering

VFC providers order vaccines supplied by CDC through DHSS. Currently, providers submit paper orders to DHSS who enter them into a CDC application. This project will create a system for providers to order their vaccines via an automated interface with the CDC Vaccine Tracking System (Vtrcks). The new functionality will become a module of ShowMeVax.



HIGHER EDUCATION

The Coordinating Board for Higher Education (CBHE), the Missouri Department of Higher Education (MDHE), and the state's institutions of higher education work collaboratively to support a diverse system of affordable, accessible, high-quality educational institutions that demonstrate student learning and development, encourage and support innovation, foster civic engagement, enhance the cultural life of Missourians and contribute to economic growth.

MDHE Systems

MDHE system development and maintenance is performed by ITSD-DHE programmers using the following technologies:

- Legacy Programming Technologies: None
- Standard Programming Technologies: Java

MDHE maintains 10 applications in its application portfolio. Below are descriptions of MDHE's most critical systems:

Customer Relationship Management System

This system tracks visits to MDHE, contacts, requests for speakers and workshop registrations.

Financial Assistance for Missouri Undergraduate Students (FAMOUS)

FAMOUS is used to administer financial aid for Missouri students attending Missouri's private, public and other nonprofit post-secondary institutions (PSIs). FAMOUS is used by PSIs to request awards and by high schools to assist students in attaining grants and scholarships. As of mid-November 2013, awards totaling more than \$44.9 million for A+, Access Missouri, Bright Flight and Ross Barnett Scholarship Programs were distributed to 56,980 students attending Missouri PSIs for the 2013-2014 academic year via FAMOUS.

Program Inventory System

This database maintains demographics on higher and continuing education institutions in Missouri, course offerings and degree programs. A public-facing web site search is used by persons seeking information about higher education offerings throughout Missouri.

Proprietary Schools System

This system is used to obtain student enrollment and exit information for training and courses offered by proprietary schools. Proprietary school personnel are able to enter student enrollment data and student exit data that can then be used for analysis by MDHE. There were 11,517 newly enrolled students at 69 different institutions during 2013. Data collected from 60 different proprietary schools indicate that 8,690 students exited their enrolled course/program during 2013. The system has useful search tools for both MDHE and proprietary schools.

Publications System

Publications is an online ordering, fulfillment and inventory system for MDHE publications available to constituents in either printed downloadable or electronic versions. During 2013 there were 454,128 items distributed to parents, students and financial aid professionals via this system.



Accomplishments

A+ Scholarship Award Enhancements

Enhancements to FAMOUS were made that added a highly flexible reporting option for all A+ Students where the authorized user, either an MDHE staff member or PSI financial aid administrator, can select the level of detail to be reported, and create a customized report to meet their reporting needs. Functionality was also added to track A+ eligible students who do not receive an A+ award due to other funding, such as the Federal Pell Grant.

Bright Flight Eligibility Reporting

FAMOUS was enhanced to track the top 4th and 5th percentile of students. There are 3,765 students now categorized accurately for this Bright Flight Award Level for Academic Year 2013-2014. Should funding become available, MDHE is poised to distribute awards upon request for these students.

Colleges & Degree Search Redevelopment

This online service was not accessible on all platforms, browsers and devices. This left a large percentage of the population, including Mac OS X, iOS, Android, Safari, Firefox and Chrome users without access to the search. The site delivers these features:

- Direct access URL collegesearch.mo.gov to promote users to the site via search engines
- Mobile ready
- Auto link to Google Maps based on school address
- Clear separation of off-sites from main campus
- Flexible searches using latest technology and techniques
- Improved search by Program or Field of Study

Program Inventory System Enhancements

System performance and user experience was improved to increase staff productivity.

Public System Enhancements

Enhancements to this system allow users to update publications, inventory information, and orders.

The screenshot shows the official website of the Missouri Department of Higher Education (MDHE). At the top, there's a banner featuring the state seal of Missouri and the text "Building Missouri's future...by degrees". Below the banner, the MDHE logo is displayed. The main navigation menu includes links for "Colleges & Degrees", "Planning & Paying for College", "Initiatives", "Policy", "Links & Resources", "Research & Data", and "News & Events". A search bar is located at the top right. The page content area features a "Popular Links" section with various links related to college search, grants, legislative updates, and student loan information.

Top 5 Reasons to Study in Missouri



1. Excellent academic programs
2. Welcome, friendly atmosphere
3. Safe environment and low cost of living
4. Spacious campuses with open space and more privacy
5. Diversity

1 | 2 | 3 | 4 | 5

INSURANCE, FINANCIAL INSTITUTIONS & PROFESSIONAL REGISTRATION

The mission of the Missouri Department of Insurance, Financial Institutions and Professional Registration (DIFP) is to efficiently and effectively encourage a fair and open market for consumer service industries.



DIFP
Department of Insurance,
Financial Institutions &
Professional Registration

DIFP Systems

DIFP system development and maintenance is performed by ITSD-DIFP programmers using the following technologies:

- Legacy Programming Technologies: SYBASE
- Standard Programming Technologies: ASP.NET, VB.NET, MS SQL

DIFP maintains 49 applications in its application portfolio. Below are descriptions of DIFP's most critical systems:

Cash Receipts System

The Cash Receipts System tracks and coordinates incoming revenues and reimbursements with invoices and electronic funds transfer.

Insurance Invoicing System (MIDIS)

MIDIS is used to create, track and maintain 13,883 invoices annually.

Integrated Regulatory Database Systems (IRDS)

IRDS supports the Insurance Division's day-to-day administrative functions and processes, including communications with the National Association of Insurance Commissioners (NAIC).

Optical Imaging System

The Optical Imaging System indexes the data stored in the Professional Registration system and provides electronic document retrieval for all 40 professional boards. This system is currently a repository for over 21 million images with 1,500,000 to 2,000,000 images being added annually.

Professional Registration System

The Professional Registration System is used by the Professional Registration Division of DIFP when performing licensing and practice review functions. DIFP's 40 professional boards and commissions license and regulate the activities of approximately 435,000 individuals representing 240 different trades and professions. This system processed approximately 48,000 applications and 233,000 biennial renewals during 2013. Of those 233,000 renewals, approximately 162,000 were performed through the online renewal portion of the system. This system is currently being replaced.

Taxation System

The Taxation System records, tracks and processes the annual tax responsibilities for Missouri insurance companies, surplus lines producers and captive insurance companies.

LABOR and INDUSTRIAL RELATIONS

Accomplishments

Database Standardization

This project consolidated and standardized DIFP databases to the MS SQL platform. This standardization saves money and increases the productivity of ITSD-DIFP developers. This was the first phase of a 3 phase conversion which will ultimately reduce maintenance costs by over \$34,000 annually.

E-Docs 2.0

E-docs is a central, secure repository for many request forms and approval documents required internally by DIFP. E-docs was converted from SharePoint to .NET technology in order to improve the user experience and increase security.

Projects

Deductible Option Surcharge (DOS) Assessments

Premium Tax Deductible Option Surcharge invoices that are generated, printed and mailed to insurance companies will be emailed once this project is complete.

Medical Malpractice Collection Automation

An online portal will allow the industry to report medical professional liability claims electronically. This will eliminate a paper process that requires manual data entry.

Professional Registration Licensure System Upgrade

The existing licensure system for Professional Registration went into production in 1999 and serves all 40 boards. This multi-year project will replace the current system and employ more efficient self-service functionality for the approximately 430,000 licensed professionals in Missouri.

Taxation Web Portal

This project will create an online web portal for the existing Taxation System. The system will allow insurance companies to complete forms online.

DIFP Department of Insurance, Financial Institutions & Professional Registration

Licensing Industry Forms Licensee Search Consumer Complaints

Jay Nixon, Governor
John M. Huff, Director

Search

Protecting Missouri consumers
Questions? Complaints?
Click here to file a complaint

The Department of Labor and Industrial Relations (DOLIR) works to promote industry and labor and protect the rights and safety of Missouri's workforce.



DOLIR Systems

DOLIR system development and maintenance is performed by ITSD-DOLIR programmers using the following technologies:

- Legacy Programming Technologies: COBOL, CA Gen, AS/400
- Standard Programming Technologies: JAVA, DB2, MS SQL

DOLIR maintains 13 applications in its application portfolio. Below are descriptions of DOLIR's most critical systems:

Unemployment Benefits System

This system is used to process unemployment benefit payments to unemployed Missouri workers. The system facilitates prompt payment of unemployment benefits to eligible claimants via direct deposit, debit card, or check as necessary. The system processes Combined Wage Claims (CWC) for unemployed workers who have wage credits in other states, claims for federal workers and former members of the military. It also manages child support withholding, SSN and alien verification, Form-1099s for claimants, the imaging of paper claim forms, work search verifications and waivers, tax withholding requests, adjustments to claims, confidential information requests, and images documents. Within the past 12 months, 224,836 Missouri workers received Unemployment benefits totaling \$791,764,429.88. This legacy mainframe-based system is currently being modernized.

Unemployment Tax System (Contributions & USTAR)

The Contributions (Tax) Application and USTAR are used to handle the collection of Unemployment Insurance (UI) taxes from employers in the state. The system provides a means to establish and maintain accounts for employers, calculates tax rates and makes liability determinations. The system processes quarterly Contribution Wage (CW) reports, payments from employers, adjustments, refunds to employers and benefit charges. Within the past 12 months, an average of 138,517 employers have paid UI taxes quarterly totaling \$699,709,024.12. This legacy mainframe-based system is scheduled to begin modernization in 2014.

Workers' Compensation System (AICS)

The Automated Integrated Claims System (AICS) assists in administering the Missouri Workers' Compensation Law and applicable rules. The system captures images and data from required documents such as First Reports of Injuries, Claims for Compensation, Answers to Claims for Compensation, Notice of Commencement/Termination of Compensation, medical records and documents relied upon by administrative law judges in approving Compromise Stipulations of Settlement and issuing awards on disputed cases. Within the past 12 months, 103,064 workplace injuries were reported to DOLIR. Administrative law judges approved a combined total of 20,038 Stipulations of Settlement and awards. This legacy system is a candidate for modernization when resources become available.

Accomplishments

Unemployment Insurance Benefits Sequestration

Due to the federal sequestration of UI benefits, the UI Benefits system was modified to withhold payments to unemployed Missouri workers who were collecting extended unemployment compensation.

Unemployment Insurance Auditors Mapping Application

This application is a tool developed in Google maps that helps auditors better maximize travel routes and audit supervisors to better manage workloads for districts and regions. These maps also identify locations of employers with delinquent Unemployment Tax, allowing auditors to make each trip more productive by potentially recovering delinquent taxes.

Projects

Cost Accounting/Time Keeping Modernization

This project focuses on replacing the 40 year old legacy Cost Accounting system in addition to replacing the Time Reporting, Time Distribution, General Ledger, and Reporting subsystems with a customized COTS solution.

This project will provide improved and timely financial reporting to support management decision making and also reduce manual processing and data entry. Objectives of this project include improving accuracy of data, improving compliance with federal cash management requirements and improving accuracy of federal reporting.

Labor.mo.gov Redevelopment

The labor.mo.gov website is being redeveloped to utilize the Drupal Content Management system, allowing DOLIR employees to update website content. The new website has improved the user experience and is optimized for mobile devices.

Unemployment Insurance Auditors Mobile Application

This project will result in an automated mobile solution for Unemployment Insurance (UI) Audit staff to manage information supporting their business processes. The mobile application will provide access to UI Employer Contribution information at remote sites as staff perform their audits. This will improve productivity for DOLIR field staff, reduce paper, quicken case processing times and potentially lead to additional detection of misclassified workers.

Unemployment Insurance Modernization (UIM)

The current Unemployment Insurance Benefits and Tax Systems have served the state for many years (parts of these systems are over 40 years old), however the risks associated with continuing to use the system have increased over time. These risks stem from its poor documentation, complexity, and use of legacy technologies that make it increasingly difficult to support and modify. The system also inhibits DOLIR from fully automating and modernizing its business processes.

UIM began in February 2013 and will be completed in 2 phases over a 3 year period.

Expected results of the project include:

- Improved services to Missouri's employers and claimants, including reduced processing times
- Improved data integrity and a reduction in claim and contribution processing errors
- Improved productivity for DOLIR staff due to increased automation
- Reduction in paper
- Improved compliance with federal and state regulations
- Reduced mailing and returned mail

MENTAL HEALTH

MISSOURI DEPARTMENT OF



The Department of Mental Health (DMH) provides prevention, treatment and promotion of public understanding for Missourians with mental illness, developmental disabilities and drug, alcohol and gambling addictions.

DHSS Systems

DMH system development and maintenance is performed by ITSD-DMH programmers using the following technologies:

- Legacy Programming Technologies: RPG
- Standard Programming Technologies: C#.NET, VB.NET, ASP.NET, MS SQL

DMH maintains 172 applications in its application portfolio. Below are descriptions of DMH's most critical systems:

Customer Information Management, Outcomes and Reporting (CIMOR)

CIMOR is an enterprise system covering a wide-range of mental health services for DMH and its contracted providers. It is a web-based .Net/SQL Server application containing nearly 1000 pages that uses several Microsoft BizTalk components, including message translation, message routing, message orchestration, business rules engine and batching processes. CIMOR:

- Primarily serves to manage DMH program enrollment
- Is a repository for billing and reporting data
- Provides a service matrix which includes procedure code modifiers, diagnosis groups, practitioner groups, base rates and billable payer types
- Stores records of clinical data such as patient demographics, diagnoses, attending physicians, bed management/assignment but is not used at the point of care for clinical decision making
- Provides for the intake and tracking of consumers, maintenance and tracking of expenditures, recording of clinical encounters and grant management
- Generates bi-monthly claims (Medicaid billing) for payment and claims adjudication
- Provides administrative functions such as gathering Medicaid identification numbers and eligibility dates for consumers

Claim Builder (CB)

CB creates and submits DMH Facility Healthcare Claims to Medicaid, Medicare and insurance companies. Unlike CIMOR's internal claims, which processes only professional claims for Medicaid, CB is designed to submit and process all types of health care related claims, professional, inpatient, outpatient, ancillary and dental claims.

CB is loosely connected to CIMOR and uses the same electronic data processing as CIMOR for sending and receiving HIPAA Compliant Claims and Electronic Explanation of Benefits (EOB). CB creates and submits claims for 34 DMH facilities and can be used to support contract provider billing in the future.

CB bills approximately \$132 million annually which is 14% of the department's total billings.

CB is HIPAA compliant and supports the latest diagnosis standards.

Accomplishments

CIMOR Code Conversion Project

The CIMOR system mentioned above was moved to production in 2006 and has had many features added since its original implementation. While the CIMOR application continued to meet the business needs expressed by DMH, the source control and coding tools used had become outdated and much of the infrastructure was close to end of life. Since CIMOR is a critical system to ensure business continuity at DMH, ITSD completed this project to extend the life of CIMOR by converting the application framework and infrastructure to new technologies. This upgrade effectively extended the life of CIMOR by an additional 7 years.

Electronic Medical Records System (ChartAssist)

Three core modules of an electronic medical records system specifically designed for psychiatric services was deployed during 2013. Three psychiatric facilities are now using the system. ChartAssist is a customized Electronic Medical Record (EMR) being developed by Mindfulware for DMH. It will be comprised of five core modules and other functionality that provides DMH interdisciplinary treatment teams the ability to document treatment and measure progress along with other vital information necessary for treatment. The three core modules that are currently implemented are:

- Treatment Plans
- Progress Notes
- Scheduling

Medical Consultations

A Medical Consultations web-based application that tracks both in-house and outside clinic appointments, as well as results tracking, was completed in 2013. The application is currently implemented in St. Louis Psychiatric Rehabilitation Center. The most significant advantages to the automated system include improved accessibility to health care information allowing for better client care, effective communication among health care disciplines, and improved communication with guardians and family members.

Missouri Employees Learning System (MELS)

MELS was implemented for DMH using the open-source Moodle to replace an existing eLearning management system. MELS is customizable, allowing greater flexibility in the development of training courses and provides tracking and reporting capabilities to support regulatory reporting requirements of DMH.

New Outlook Program

A new application called New Outlook Program was completed in 2013 and is implemented at Fulton State Hospital. The application tracks daily behavior of clients to measure the success of their associated treatment plans. Examples include daily activities and diaries. The system aggregates data collection to identify trends in treatment for behavior therapy interventions. This allows DMH to help determine if the treatment plans given to the clients are effective. This ultimately allows for better client care.

Pharmacy Management System

DMH has implemented MetaCare Enterprise RX for pharmacies located in seven DMH Comprehensive Psychiatric Services (CPS) facilities. The Meta software solution replaced an existing legacy pharmacy software called Quadramed. The META software was customized for Fulton State Hospital which processes 1.9 million

doses of medication and over \$1.5 million in Medicare Part D reimbursements annually. The system provides safeguards against errors in prescribing, transcribing, and dispensing medications, and ensures proper documentation for regulatory compliance. Seven pharmacies have now gone live with MetaCare RX. MetaCare RX receives patient admission, discharge, transfer, and bed assignment data from CIMOR via HL7 ADT messages, and transmits HL7 DFT messages to Central Office for billing pharmaceuticals to Medicare Part D through Claim Builder.

Projects

Electronic Medical Records System (ChartAssist)

DMH has contracted with Mindfulware for a customized Electronic Medical Records (EMR) system specifically designed for psychiatric services. The remaining two core modules, bio-psychosocial assessments and nursing flow sheets, are currently in development. After completion of these core modules, the system will be comprised of five core modules and other functionality that provides DMH interdisciplinary treatment teams the ability to document treatment, measure progress, and retain vital information necessary for treatment.

Enterprise Content Management (ECM)

There were a number of factors driving the initiative to acquire an ECM solution including:

- Escalating costs of maintaining antiquated mid-range hardware (AS/400)
- Limited ability of existing systems to scale as records continue to grow
- Need for a stronger records and retention management solution for maintaining HIPPA compliance

The project is presently in pilot stage at 2 CPS facilities in their Human Resources (HR) units with the goal of expanding to all HR departments across DMH. After the initial ECM HR project, several additional ECM projects are planned including scanning of paper patient records and accounts receivable and payable.

International Classification of Disease, version 10 (ICD-10)

The new ICD-10 code sets accommodate specificity not available in the ICD-9 code sets. For example, the total number of ICD-9 codes including diagnosis and hospital procedures is approximately 18,000 and the total number of ICD-10 codes is approximately 140,000. This additional specificity offers the entire U.S. health care industry the ability to enhance current business processes. Examples include more targeted program integrity (PI) activities and more proactive case management, disease management, and utilization management (UM). Additionally, it is expected that the move to these new code-sets will allow payers to more appropriately reimburse providers based on the complexity and acuity of a patient's health status.

DMH, as a covered entity under the HIPAA law, is responsible to ensure its compliance with the ICD-10 mandates. This requires system changes to CIMOR and other medical billing systems.

Timekeeping

DMH is implementing a standardized timekeeping, scheduling, and attendance system across the Inpatient Behavioral Health Division (CPS), comprised of 9 facilities. The system will interface directly with Sam II and automate timekeeping reports, such as tardiness, FMLA, sick leave usage and call-in patterns. The timekeeping system is currently in the pilot stage at 2 CPS facilities.

NATURAL RESOURCES



**MISSOURI
DEPARTMENT OF
NATURAL RESOURCES**

The mission of the Department of Natural Resources (DNR) is to protect, preserve and enhance Missouri's natural, cultural and energy resources.

DNR Systems

DNR system development and maintenance is performed by ITSD-DNR programmers using the following technologies:

- Legacy Programming Technologies: Lotus Notes, Microsoft Access
- Standard Programming Technologies: C#.NET, Java/Websphere, MS SQL, DB2

DNR maintains 102 applications in its application portfolio. Below are descriptions of DNR's most critical systems:

Air Quality - Missouri Emissions Inventory System (MoEIS)

MoEIS is a JAVA system that manages information about regulated facilities, enforcement classification, operating permit type and operating status for air quality. The system allows regulated facilities to input emissions data required by the EPA.

Campground Reservation System (CRS)

This third party online transactional system is used by the public to reserve State Park campgrounds and process online payments.

ePermitting System

ePermitting allows the public to apply for, pay for and receive Land Disturbance permits from DNR via an online system.

Environmental Sampling - Laboratory Information Management System (LIMS)

LIMS stores data from sample analysis from Environmental Services Program (ESP) testing of Missouri waterways, air and soil for more than 660 different compounds, including E. Coli. The data is provided to the public via the dnr.mo.gov website and is used to determine waterway/beach closures. This is a third party application with data residing in SQL.

Field Inspections - Assistance Compliance Enforcement (ACE)

ACE is a Microsoft .NET system that enables the Division of Environmental Quality to track assistance to facilities via environmental visits, investigation of environmental concerns, inspections for compliance and enforcement to return facilities to compliance.

Hazardous Waste - Site Management and Reporting System (SMARS)

SMARS is a system used by the Hazardous Waste Program to register and track hazardous waste sites and clean-up operations across the state. This application is a candidate for conversion to a web-based application. It is currently a Microsoft Access solution with data residing within Access itself.

Missouri Soil & Water Information Management System (MoSWIMS)

MoSWIMS tracks an annual \$40 million cost-share program for soil conservation efforts within the state. Districts process contracts more efficiently and landowners see a faster turnaround on receiving their reimbursement checks. This JAVA system was used by the State of Missouri's Drought Response team during the 2012 drought.

Solid Waste Management - Fees and Taxes (FAT)

FAT is an application used by the Hazardous Waste Program to track fees and taxes on hazardous waste generators, haulers and others dealing with hazardous waste.

Water Quality - Missouri Clean Water Information System (MoCWIS)

MoCWIS is used by DNR to permit, track and monitor facilities that discharge to waters of the state. This JAVA system also tracks modifications to the state's water quality standards.

Well Information Management System (WIMS)

WIMS contains information on location, construction and some geology for most wells constructed after October 1986 in the state. WIMS is a web-based JAVA system.

Accomplishments

Electronic Discharge Monitoring Reports (eDMR)

eDMR is an application that was developed to integrate with the Missouri Clean Water Information System (MoCWIS) for the purpose of allowing regulated entities to submit their discharge monitoring reports (DMRs) electronically through a secure portal. Regulated entities are still allowed to submit paper reports, which must be manually entered into MoCWIS, however the intent is to continually increase the number of entities who submit electronically through these technology advancements. Currently, 5 full time staff manually enter and cross-check the forms submitted by paper. As the number of entities who electronically submit increases, staff will be redirected to other duties that more directly protect the environment. By electronically validating these reports as they are submitted and prompting the entities for missing information, increased time and expense will be avoided by a reduction in the number of investigations and enforcement actions for non-receipt of required data.

Toxic Release Inventory (TRI)

TRI is a mandated flow of data from the EPA to DNR. This project developed software and implemented new hardware to accommodate this new data. The TRI data contains information about the location and inventory of toxic chemicals in the state of Missouri, which is critical in the event of a catastrophe.

Projects

DNR Environmental and Regulatory Data Integration

DNR's historic approach to data management has been highly compartmentalized into hundreds of separate applications with data stored ranging from complex modern enterprise data systems to Access databases, Excel spreadsheets and handwritten logs. Data cannot be easily shared internally due to the varying technologies and is highly duplicative in many cases. The cost of maintaining legacy applications that are similar in nature and collect similar data that cannot be linked together is at the expense of investing in modern technologies. By developing an integrated, geographic-based information management system that is the backbone for core regulatory and environmental functions, the agency can streamline regulatory processes and provide enhanced services to customers as well as more easily provide appropriate environmental information to the general public.

Missouri State Parks Capital Improvements

The Division of State Parks (DSP) is tasked with managing all aspects of Capital Improvement (CI) projects for the Parks system. A new system will provide more transparency into CI projects.

ICIS-NPDES Release 2 & 3

This project will improve the accuracy and timeliness of environmental data submission to EPA, and therefore enhance environmental decision-making and coordination among the department and EPA. In addition, DNR will realize a burden reduction in department staff and resources since DNR will no longer need to manually provide data to ICIS-NPDES for inspection and enforcement data.

Underground Injection Controls (UIC)

The objective of the UIC project is to share data from DNR to the EPA regarding Class II and Class V wells in Missouri electronically. Missouri Geological Survey (MGS) staff currently submit data to the EPA using paper reports that must be assembled manually from numerous, disparate data sources, mostly in legacy Access databases.

Drinking Water Fees into Fees Tracking System (FTS)

This project will move DNR's statutory Drinking Water (DW) fees data into the existing Fees Tracking System. This project will save an average of 17 hours per week for staff of the Budget and Fees Unit who currently search paper files and correct data entry errors. This equates to \$24,560 savings annually in staffing including fringe benefits.

Missouri River Trail Website

This project will update and enhance the Missouri River Trail website. The website is used to promote public awareness of the water trail and promote paddling. There are economic benefits associated with this tourism on the lower Missouri River.

PUBLIC SAFETY

The Department of Public Safety (DPS) coordinates with public and private entities to assist with crime prevention and investigation, protect against threats of terror, ensure public safety and provide emergency response, care and recovery assistance.

DPS Systems

DPS system development and maintenance is performed by ITSD-DPS programmers using the following technologies:

- Legacy Programming Technologies: COBOL, CA Gen, AS/400
- Standard Programming Technologies: .NET, MS SQL

DPS maintains 67 applications in its application portfolio. Below are descriptions of DPS' most critical systems:

Alcohol Licensing & Excise Tax Collection

The Alcohol and Tobacco Control (ATC) Liquor License System tracks license information including owners, financial, legal description, violations, tax collection, keg registration, inspections, primary source and more. It is an AS/400 COBOL based system and is a candidate for modernization as resources permit. This system currently tracks 24,251 active liquor licenses. During FY 2013, it was used to renew 24,422 licenses and collect over \$34 million in excise taxes.

Computer-Aided Dispatch and Records Management System (CAD/RMS)

The Missouri Capitol Police (MCP) Computer-Aided Dispatch and Records Management System (CAD/RMS) is a Visual Basic application designed to help dispatch MCP resources to the daily activities in and around the Capitol. This system is used to track approximately 40,000 calls and activities annually.

Missouri Uniform Law Enforcement System (MULES)

The Missouri State Highway Patrol (MSHP) provides the Missouri Uniform Law Enforcement System (MULES) to nearly 10,000 criminal justice users statewide. The system processes millions of transactions each year – including driver and vehicle license checks, stolen vehicles, missing persons, probation/parole and criminal history. It is supported by MSHP staff.

Resource Request System

The State Emergency Management Agency (SEMA) Resource Request System is used to enter and track resource requests during a disaster. It is a Visual Basic/.Net system.

WebGrants System

DPS currently uses the WebGrants system to manage up to 22 separate grants. In FY13, there were over 700 awards made to 400 agencies of approximately \$30,000,000.



Accomplishments

WebEOC

In 2013, SEMA began implementing an event management application; WebEOC. This product provides situational awareness to SEMA and its partners around the state. SEMA uses this application to manage their response to events around the state and region. Local agencies will use this system to report their status during an event with up-to-date information. The information gathered will be disseminated to the agencies and organizations needed to provide support and coordination.

Veteran Homes Wireless Network

The Missouri Veteran's Commission (MVC) maintains seven Veterans Homes in the state. Residents of the homes have requested public Wi-Fi access in the facilities. This project implemented a managed, wireless network offering both public internet access as well as a secure, private network in each of the veterans homes. The private wireless access is the first step toward future projects including a new medical records system and the use of Wi-Fi and UC telephones.

The screenshot shows the Missouri Department of Public Safety website. At the top, there's a banner for "Missouri Supports Crime Victims" featuring a group of people clapping. Below the banner, the navigation menu includes links for Office of the Director, Alcohol & Tobacco, National Guard, Capitol Police, Fire Safety, Highway Patrol, SEMA, Veterans Commission, and Gaming Commission. A search bar with the placeholder "Enter Keywords or Phrase..." and a "Search" button is also present. On the right side of the page, there's a "AMBER Alert PORTAL" section with the text "Find out if an alert is currently active." Under the "Director's Programs" heading, there are links to Interoperable Communications Initiative, Homeland Security, Crime Victims Services Unit (CVSU), Peace Officer Standards & Training (POST), Juvenile Justice, and Criminal Justice/Law Enforcement (CJ/LE). At the bottom, there are four buttons: Fire Escape Planning, Supporting Crime Victims, Missouri StormAware, and Flash Flooding Safety.

Projects

Alcohol Sales Excise Tax ePayments

ATC currently collects over \$34 million in excise tax revenue each year and licenses 1,070 solicitor and manufacturer licensees and 176 wholesaler licensees that report liquor shipments made and received each month. In addition, there are currently 970 wine direct shipper licensees who are required to file an annual excise tax report. The new system will allow the manufacturers and wholesalers to submit their monthly reports electronically to the state. In addition, the manufacturers will have the option to pay their monthly excise taxes electronically.

WebEOC Development - Phase 2

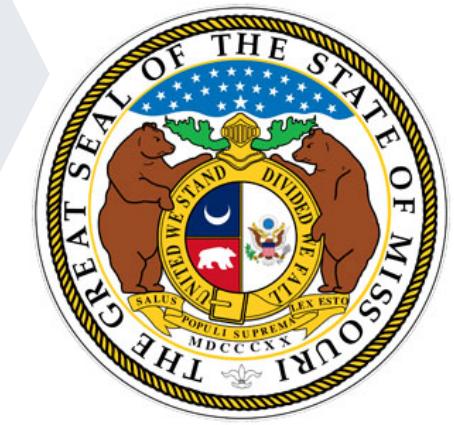
WebEOC Phase 2 implements health-related pages and reports needed in a disaster.

Veteran's Cemetery Database Consolidation

Currently, the five Missouri veteran's cemeteries rely on Access databases for tracking the applications and approvals of veterans and their spouses and/or dependents for burial in a state cemetery. These databases will be consolidated to expand reporting capabilities and coordinated backup.

REVENUE

The mission of the Department of Revenue (DOR) is to facilitate the proper functioning of state and local government by accurately and efficiently collecting and distributing state and local revenues and to support public safety by effectively administering laws related to motor vehicle sale and registration and driver licensing. The Department accomplishes this mission by following the law; fostering innovation in its operations; developing cooperative relationships with other public and private entities; clearly communicating with the public; and treating everyone fairly and with respect.



DOR Systems

DOR system development and maintenance is performed by ITSD-DOR programmers using the following technologies:

- Legacy Programming Technologies: COBOL, IDMS
- Standard Programming Technologies: .NET, MS SQL

ITSD-DOR maintains approximately 140 applications in its application portfolio. Below are descriptions of DOR's most critical systems:

Corporate Income Tax Systems (COINS, BAMS, CAFE & Corporate MeFile)

The Corporate Income Tax System (COINS) processes all corporate income and franchise tax returns for DOR. This system accepts data received electronically from various sources, performs audit checks and alerts DOR staff as to any errors encountered. The system produces all billings, refunds, notices and adjustments for all corporations filing tax returns in the state. In the past year, more than 149,000 returns were processed. The Batch Monitoring System (BAMS) and Corporate and Franchise Entry (CAFE) are associated data entry systems. Corporate MeFile is the electronic filing system for corporate income tax.

Delinquent Revenue Collection System (CACS)

The Computer Assisted Collections System (CACS) centralizes delinquent revenue collection functions for all major taxes, including sales, use, corporate, individual and withholding taxes. This system is used by DOR to document contacts from delinquent taxpayers, set up payment plans, issue enforced collection notices, and produce garnishments. There are over 1,135,000 delinquent cases maintained in the system.

Driver Licensing Systems (MODL, MEDL & Associated AAMVA Systems)

The Missouri Driver License System (MODL) is the central driver license record keeping system that contains license issuance, withdrawal, convictions, suspensions, revocations, disqualifications, reinstatements and driver status information. The system maintains over 6,100,000 driver and non-driver license records. The Missouri Electronic Driver License System (MEDL) is the mechanism for processing driver and non-driver license applications through the DOR. There are several associated systems primarily maintained by the American Association of Motor Vehicle Administrators (AAMVA) that are required to be checked prior to issuing a driver or nondriver license.

Individual Income Tax Systems (MINITS, SpeedUp, GiddyUp, Field 1040 & Individual MeFile)

The Missouri Individual Income Tax System (MINITS) processes all individual income tax and property tax credit returns. This system merges data received from three electronic sources, performs audit checks and alerts DOR staff to errors on filed documents. This system issues notices, refunds, and facilitates adjustments on all individual income tax and property tax credit returns filed. There were more than 3,100,000 returns processed through this system during the past year. SpeedUp and GiddyUp are the data-entry systems for MINITS. Field 1040 is an application used by the field offices to complete and transmit taxpayers' Missouri individual income tax return. Individual MeFile is the electronic filing system for individual income tax.

Motor Vehicle Systems (GRS, Marine, Titles & TRIPS)

The major motor vehicle systems include GRS, Marine, Titles and TRIPS. The General Registration System (GRS) maintains the current ownership and titling of vehicles and provides current and historical information on the registration of motor vehicles. The Marine System maintains the titling and registration of marine and watercraft vehicles and titles boats and motors by generating and distributing legal certificates of ownership. The Titles system provides information on motor vehicle titling and lien holders, prints the ownership document and records the lien information for the citizen. The Title & Registration Intranet Processing System (TRIPS) is the mechanism for web-based data capture of motor vehicle registration and titling transactions from the license offices. There are more than 11,000,000 records in GRS.

Sales and Use Tax System (MITS, MOST & BusFile)

MITS is the registration system for corporations, employers and businesses required to file sales or use tax. MOST processes all sales tax and use tax returns filed by Missouri businesses or companies doing business in Missouri. The system processes electronic and paper returns and payments, completes audit checks on the data filed and initiates the required refunds, credits, billings and adjustments as necessary. In the past year, this system processed more than 600,000 returns.

Tax Compliance System

The Tax Compliance System (TCS) includes an Enterprise Data Warehouse (EDW), Case Audit Management System (CAMS) and WebFocus reporting. The system is used by auditors to manage cases. The system is also used extensively for non-compliance identification and resolution, and has generated \$412.8 million in additional revenue since its inception in 2005. Additionally, WebFocus is used to generate a wide range of reports from the EDW. The EDW is a Teradata product utilizing its own DBMS, housed in a distributed environment provided by Teradata. CAMS is a customized vendor-supported application that uses the EDW as well as its own SQL database. CAMS mobile functionality allows the auditors to use all of the system while at the audit site, then sync the new and revised information back to the case stored on the network without duplication of effort.

Withholding Tax System (WITHTX)

The Withholding Tax System (WITHTX) processes all Missouri withholding tax returns. This system produces billings, notices and adjustments for businesses required to withhold and remit Missouri income tax for their employees. This system also interacts with the state accounting system to issue refunds on tax over-payments. This system processed more than 1,000,000 returns in the past year.

Accomplishments

Commercial Driver License Information System (CDLIS) Modernization

Upgrades to CDLIS were made to comply with enhanced federal standards for the issuance of commercial driver licenses.

Court Notification Enhancements

Thirty three new counties joining the electronic process and garnishment document filing were added to the system in 2013. There are approximately 3,000 judgments and 460 garnishments sent electronically each month.

Dealer Application Status Inquiry

This new application allows motor vehicle dealers to check on the status of their dealer license renewal application online instead of via a phone call.

Driver Licensing

This project redeveloped the previous system, Missouri Electronic Driver License – Over The Counter (MEDL-OTC), to a Missouri Electronic Driver License – Central Issuance system (MEDL-

Projects

Corporate Tax Treasury Offset Program (TOP) Phase 2

Phase 1 of this project implemented notification to delinquent corporate taxpayers of DOR's intention to certify their delinquencies to the IRS for offset of federal tax refunds. Phase 2 will provide the certification of these delinquencies to the IRS along with all the functionality necessary to process offset payments received from the IRS, continual updates of the delinquencies that have been certified and the process to certify newly established delinquencies.

Electronic Court Notification Enhancement

Thirty one new counties will be added to the electronic court notification project that allows DOR to send administrative judgments and garnishments to the courts electronically.

Integrated Revenue System

This multi-year project for DOR to acquire and configure a commercial-off-the-shelf (COTS) system and related software tools provided by Revenue Solutions Inc. (RSI) began in 2012.

DOR currently uses a combination of software systems, both mainframe and server based. The most critical of these systems were built on 30-year old technology that is increasingly difficult and expensive to use and maintain. In addition, since the various tax systems were built independently, communication between systems is limited and numerous interfaces between systems are required to allow the systems to communicate at all. Changes are not consistently applied across all systems. The pool of personnel resources with the skills to maintain these old technologies continues to get smaller. The difficulty of timely modification of the legacy systems to incorporate legislative changes and technology advancements will increase over time. The aging systems also limit DOR's ability to leverage current technology to realize processing savings or efficiency.

An up-to-date, integrated revenue system will provide a myriad of benefits for the State of Missouri. Some of the general benefits of a new system include:

- Reduced operating and maintenance costs, especially in the area of return processing
- Tools that enhance collections management, audit selection and non-filer discovery
- Increased voluntary compliance
- Faster access to taxpayer data, both by DOR users and through direct taxpayer access
- More frequent data warehouse refreshes, resulting in more accurate analysis
- Improved productivity through workflow management
- Elimination of business silos, allowing DOR to view all taxpayer activity across tax types
- Better modeling and faster implementation of tax law changes
- More reliable data, with better analytical capabilities
- Improved customer service

Release 1 which includes all core system functionality and is specifically targeted to be used for registration and tire and battery fee processing is scheduled to go live in February 2014.

Motor Vehicle / Driver License System Modernization

Research, analysis, and evaluation efforts are underway to determine how legacy motor vehicle and driver license systems should be modernized.

A modernized motor vehicle and driver license system will provide various benefits for the State of Missouri. Some of the potential benefits of a new system include:

- Customer-centric data
- Real time data processing
- Ease of sharing data among the systems and with other state agencies
- Increased fraud prevention
- Automation of manual processes
- Minimized data redundancy
- Enhanced data integrity and security
- Consistent user interface
- Improved reporting capabilities
- Improved customer service and customer satisfaction

Tax Increment Financing (TIF) Annual Reporting Application

Executive Order 13-02 transferred the responsibility of collection and disbursement of municipality TIF data from DED to DOR. This project creates a system by which municipalities with TIF-supported development projects will self-report required information to DOR.

Tax Credit Reporting System

Executive Order 13-02 also transferred certain tax credit compliance responsibilities from DED to DOR. This project will create a system by which certain tax credit recipients will self-report required information to DOR.

SOCIAL SERVICES



The Department of Social Services (DSS) works to maintain or improve the quality of life for Missouri citizens.

DSS Systems

DSS system development and maintenance is performed by ITSD-DSS programmers and contractors using the following technologies:

- Legacy Programming Technologies: COBOL, CA Gen, Mainframe DB2, IDMS
- Standard Programming Technologies: .NET, MS SQL, DB2

DSS maintains 157 applications in its application portfolio. Below are descriptions of DSS' most critical systems:

Common Client Area

The Common Client Area is a centralized repository for personal information that identifies an individual/client. Each newborn client is assigned a unique Departmental Client Number (DCN), which is used by DSS, DHSS, DMH, Missouri Juvenile Justice Information System (MOJJIS), the Electronic Benefit Transfer (EBT) and MMIS vendors. The DCN allows multiple agencies to easily track and coordinate services.

Child Support System (MACSS)

The Missouri Automated Child Support System (MACSS) is responsible for collection and disbursement of child support through enforcement of existing judicial and administrative orders, location activities, paternity establishment, establishment of orders and various other activities. Since implementation of centralized collections, this system distributes child support payments. MACSS is utilized to provide services to approximately 1,722,004 citizens annually.

Child Welfare System (FACES)

The Family and Children's Electronic System (FACES) meets the federal requirements for a State Automated Child Welfare Information System (SACWIS). FACES integrates eight separate Child Welfare applications into one seamless system that includes the Child Abuse Hotline, Children's Services, Program Eligibility, Program Authorizations, Family Centered Services, Intensive In-Home Services, Alternative Care, Child Accounting, Common Vendor, Contracts and Licensing and Children Services Payments. This system serves as a comprehensive automated case management tool that supports Children's Division staff and contracted Case Managers. FACES system development and maintenance occurs on multiple platforms. Most of the application resides on the mainframe (COBOL) platform, but some new functionality has been developed using the .NET framework on a server platform.

Over 134,000 calls are taken annually by the Child Abuse Hotline and entered into the FACES application. Also, on a monthly average, the FACES application processes over 10,500 family and 31,900 children cases.

Human Service Benefits System - Legacy (FAMIS)

The Family Assistance Management Information System (FAMIS) is an online eligibility determination system used to gather and record information from Missouri residents who apply, determining what programs and level of benefits they are eligible to receive. FAMIS manages case information for the following Family Support Division (FSD) assistance programs: Food Stamps, Temporary Assistance for Needy Families, Adult Medicaid, Family Medicaid and Child Care. The FAMIS system integrates eligibility determinations and processing for Missouri's public assistance programs into a single system. FAMIS provides efficiency and reduces the burden on the FSD eligibility specialists as they only have to enter information into one system to simultaneously determine eligibility for many programs for a client.

The system reduces error rates, saving the state money and ensuring public assistance recipients receive the correct benefit levels. FAMIS application development and maintenance occurs on multiple platforms. Most of the application resides on the mainframe (COBOL and Advantage) platform, but some new functionality has been developed using the .NET framework on a server platform. The FAMIS application processed 112,342 new applications for benefits and 1,518,668 different eligibility determinations during October 2013.

This number represents the total number of eligibility determinations for all programs (i.e., Food Stamps, Temporary Assistance, Medicaid, etc.). Therefore, FAMIS processes approximately 48,989 determinations per day or 12,149,272 eligibility determinations per year.

Human Service Benefits System - Modern (MEDES)

The goal of the MEDES project is to implement a system that provides greater convenience to citizens requesting benefits while decreasing the amount of state resources required to process and manage public assistance caseloads.

FAMIS, like most states' Medicaid eligibility and enrollment systems, does not meet most of the new MITA standards established by the federal government. These new standards are intended to promote implementation of systems built on service oriented architecture (SOA) platforms with components and rules sets that can be shared with other states and systems. A new Missouri Eligibility Determination and Enrollment System (MEDES) will provide a 21st century user experience allowing citizens to apply via the Internet, have eligibility determined and receive a benefit in a single session. It will also support other human services programs such as Temporary Assistance, Child Care Assistance and Food Stamps.

The new system would increase productivity for state employees, reduce processing times, increase flexibility of the system and ensure the sustainability of the system.

Human Service Benefits System - Modern (MEDES)

MMIS is the State's contracted (WiPro and Xerox) mechanized claims processing and information retrieval system for Medicaid. Functions of MMIS include, but are not limited to:

- Provider Enrollment
- Claims Processing, Pricing and History
- Provider Payment
- Federal Financial and Ad Hoc Reporting
- Clinical and Pharmacy Claims Adjudication
- Prior Authorization
- Automated and manual pre-certification of Optical, DME, Radiology, and Psychology services
- Automated and manual pre-certification of inpatient services & determination of length of stay
- Automated and manual pre-certification of outpatient Radiology services performed on advanced imaging technologies
- Portal allowing providers access to Medicaid claims history and tools including e-prescription and medication possession ratio
- Personal Health Record portal for Medicaid participants
- Medication Therapy Management and Immunization Billing
- Home and Community Based Services portal and management tools

Approximately 103.5 million claim transactions were adjudicated during FY 2013.

Accomplishments

Following are some of the notable accomplishments of the ITSD-OA team and DSS during 2013:

Missouri Eligibility Determination and Enrollment System (MEDES)

MEDES is a case management system that will eventually provide eligibility determinations and enrollment in Medicaid and Human Services programs. Development began in June 2013 with a contract awarded for systems integration services to design, implement and maintain the MEDES.

The MEDES Citizen Portal was implemented in Release 1 on October 1, 2013. The portal provides an online application for family Medicaid that incorporates the Single, Streamlined Application. This provides convenience to the applicant by sharing the information from a single application for multiple programs. Release 1A occurred on November 7, 2013 and implemented functionality referred to as the “Better Door”. This functionality assesses a family’s eligibility early in the application process and either continues the application for Medicaid or refers the applicant to the Federally-Facilitated Marketplace (as required by the ACA) based on the assessment results. This reduces the amount of information an applicant has to re-enter on the federal site and prevents state staff from processing a large number of applications for families that are not eligible for Medicaid.

Release 2 is scheduled for January 1, 2014 and subsequent releases and projects will continue through the end of 2015.

Temporary Assistance (TA) Drug Testing

MO House Bill (HB 73) of 2011 mandated that DSS develop a drug screening program for applicants and recipients of Temporary Assistance for Needy Families (TANF) program benefits, and test each individual who is otherwise eligible and who the agency has reasonable cause to believe based on the screening is engaging in illegal use of controlled substances. To administer the drug screening program and meet the requirements of HB 73, the existing FAMIS/TA eligibility subsystem was enhanced.

Pharmacy Tax

The Pharmacy Tax System was modernized to automate several manual processes.

Title IV-E Eligible Guardian Assistance Program (GAP)

An enhancement to FACES allows the state to determine eligibility for and claim IV-E dollars for children who meet the requirements in an automated fashion.

Projects

Changes to Child Support Income Withholding Orders

A MACSS project will implement a comprehensive policy change on redirecting payments collected on child support orders issued by another state. The corrective changes to Income Withholding Orders on out-of-state orders will direct payments to the State Disbursement Unit of the state that issued the order, instead of the Missouri State Disbursement Unit. This change will affect more than 30,000 cases.

FACES Adoption Function

A new “Adoption Function” (AD) is needed for the Family and Children Electronic System (FACES). This new function will provide

the ability to clearly distinguish a child’s adoption spell from their foster care spell. The entire process flow will help to enforce the division between the child’s biological family case and the new adoptive family case. This new adoption function will also resolve some manual payment issues that arise due to the adoptive family still being owed funds even after a disruption in the adoption.

FACES Enhancement Project

The FACES Change Control Board has approved a list of System Change Requests and Recommendations from field staff that would improve the usability of FACES and also aid in their productivity. In addition, FACES just had its Federal SACWIS review in September 2013 which produced several system change requests.

Ticket to Work Health Assurance Premium Project

FAMIS does not currently have a code for the Ticket to Work Health Assurance (TWHA) premium paid by participants that should be used as a medical expense deduction as allowed by policy for MHABD, Food Stamps, and Child Care cases. This project will update the allowable deductions from gross income. Included is the addition of the individual MoHealthNet programs to the list of allowable deductions and clarification regarding the type of documentation required to verify monthly medical insurance premiums paid by Child Care Assistance applicants and/or recipients. Deducting verified medical insurance premiums from an applicant’s gross income is a required step in the eligibility process. Failure to do so may result in some families who need child care determined ineligible erroneously.

Bundled Claims Payment Initiative

The bundled payment initiative links payments for multiple services during an episode of care (e.g. for a surgical procedure, there will be one payment to cover the surgeon, anesthesiologist, medications and other charges instead of multiple payments for various services and items). MMIS must be modified to handle these mandated changes.

ICD-10 Implementation

Per federal CMS mandate the implementation date for the new ICD-10 codes is October 1, 2014. On this date, all diagnosis and in-patient hospital claims with Date of Service or Date of Discharge on or after October 1, 2014 will be required to utilize the ICD-10 codes rather than the ICD-9 codes which are currently being used. This will affect all providers submitting claims to any payer. The MMIS system modifications required to process the ICD-10 code sets was implemented for testing on October 1, 2013, and the provider community has until October 1, 2014 to complete testing and modifications to their systems. The state will execute an operational transition plan and work with all providers to analyze, test and verify operational readiness and functionality without negative impact or service interruption for Missouri’s citizens.

Connection to the Health Information Network (HIN)

A statewide Health Information Network (HIN) will be established by the Missouri Health Connection (MHC) to promote the statewide and nationwide exchange of health information. DSS and the MoHealthNet Division (MHD) will support MHC and the HIN by sharing Medicaid claims data through a patient query function with the healthcare providers participating in the statewide HIN. The claims data will be shared through the CyberAccess product hosted and maintained by Xerox Heritage, LLC.

Foster Care Expansion to Age 26

Senate Bill 127 extended Medicaid coverage for Foster Care individuals up to the age of 26. Individuals previously eligible under foster care coverage, who aged out of Medicaid, will now be covered up to the age of 26. The benefit package for this expansion population will be the same as for children eligible under foster care coverage. This project will automate the claims processing for these participants.

MMIS Enhancement 8 Phase 2 - Expansion of the MMIS Business Rules Engine

This project expands the Wipro InfoCrossing supported MMIS Business Rules Engine to include: Prior Authorization, History Processing, Pricing, Medical Criteria, and a Model Office testing environment. The overall flexibility and adaptability of a rules engine is needed to support the complex changes of our Missouri Medicaid program, and this expansion will allow Missouri’s MMIS to be more responsive to required changes.

Missouri Eligibility Determination and Enrollment System (MEDES)

Development of the new MEDES system will continue in 2014 as functionality is added to the system that will impact the eligibility determination and enrollment of Medicaid applicants.

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